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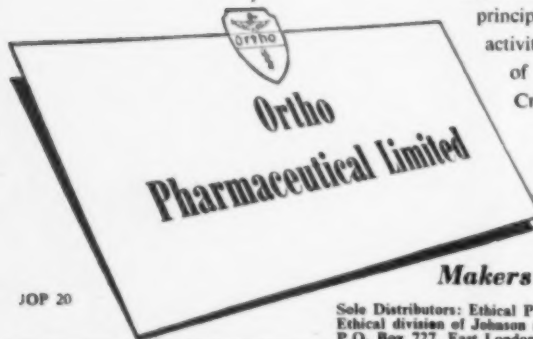
★ C. M. McLane, *Amer. J. Obst. & Gyn.* Vol. 57, 5pp. 1018—1019, May 1949.

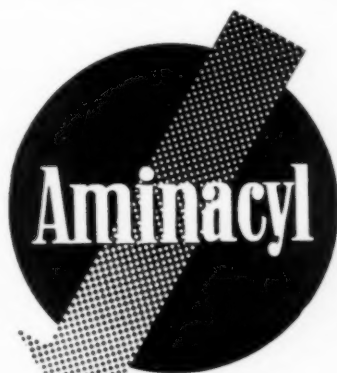
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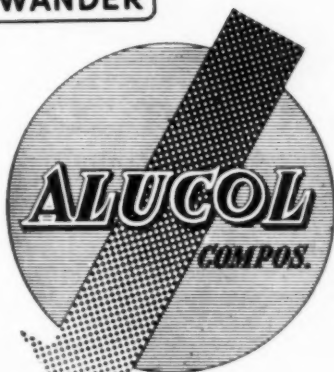
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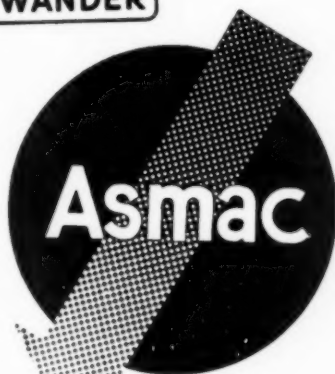
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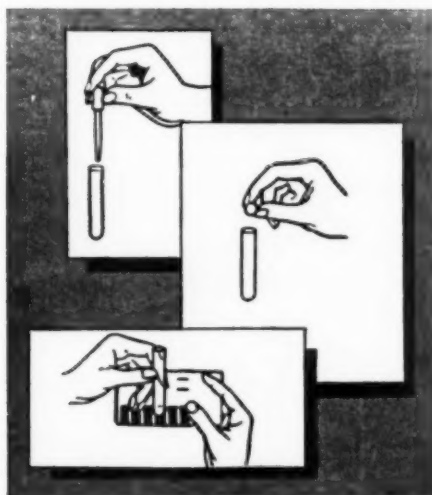


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SUGGESTED METHOD OF RENDERING BUTAZOLIDIN LESS HARMFUL

J. DRUMMOND, M.D., F.R.C.P., Ed.

and

LIONEL ATLAS, M.B., Ch.B.

Durban

The possibilities contained in the exploitation of the redux potential of vitamin C have so far escaped that earnest attention from the clinician to which their importance entitles them. There is a school of thought which deprecates the use of large doses of the vitamin and which in doing so ignores the obvious, to wit, that it is not the vitamin alone we are concerned with but the forces that can be released from it by appropriate catalysis.

Storage of the vitamin in all glandular structures and particularly in the suprarenal cortex is not an accidental happening. Lansberg and others believe that its reducing properties are incorporated into the transformation of mineralo-corticoid into gluco-corticoid, but proof of this is still lacking.

During the administration of ACTH and cortisone, as we all know so well and as we are apparently so prone to forget, there is a pronounced effect on vitamin-C storage. These hormones apparently utilize the vitamin voraciously. In the opinion of the writers if this were a matter of common knowledge and if adequate replenishment of the vitamin were made a *sine qua non* of this type of therapy a great injustice to these hormones would be removed. We should then no longer be assailed with such dogmatic statements in the medical press as: 'These hormones are dangerous to peptic ulcer patients', or 'Steroid hormones, with the possible exception of the sex members of the group, have no place to fill in ulcer therapy'.

VITAMIN C AND FERROUS IRON

Past success in treating cases of agranulocytosis, and more recent successes in dealing with peptic ulcer patients, inspire us with the belief that the harmful effects of butazolidin may be neutralized and free expression given to the undoubted beneficial effects of this agent in rheumatoid arthritis by the incorporation of vitamin C into the therapy, but only provided that it is combined with a catalyst such as ferrous iron. In our hands early failures with the vitamin alone became successes when it was realized that activation of the redux potential called for the intervention of a catalyst, and that the best one for the particular purpose was ferrous iron.

Catastrophes such as have been recorded in the literature as being due to butazolidin would seem to indicate

some interference with vitamin-C function, qualitative or quantitative or both. Haemorrhages such as we associate with thrombocytopenia or capillary fragility are not uncommon, and together with ulceration and perforation of hollow viscera and agranulocytosis constitute a somewhat frightening picture. At the same time the benefits accruing to many rheumatoid sufferers as the result of therapy with butazolidin made it imperative to search for some additional measure that would permit the therapy to be continued with reasonable safety to the patient. Purely empirically and without having recourse to ascorbic storage or excretion tests, but with the knowledge that rheumatoid sufferers are primarily in the sub-scorbutic state, we therefore decided to exploit vitamin and catalyst in 2 cases in which agranulocytosis raised its grisly head.

CASE I

Mrs. H., aged 53, was first seen on 2 February 1953 with history of pain in joints of fingers, knees and elbows off and on for several years but becoming more acute and disabling recently. The appearances of the fingers and wrists were typical of rheumatoid arthritis, with peri-articular swelling, ulnar deviation and inability to flex fingers into the palms. There was some creaking in both knee joints.

A preliminary course of DOCA (desoxycorticosterone acetate) 2.5 mg. intramuscularly and 1,000 mg. vitamin C intravenously daily for 2 weeks appeared to produce quite marked relief, but relapse occurred when the attempt was made to reduce the frequency of injections.

Substitution of progesterone 3 mg. for DOCA failed to relieve the symptoms and on 4 April 1953 a course of daily intravenous injections of suprarenal cortical extract 3 c.c. combined with 1,000 mg. vitamin C was begun in conjunction with 0.2 g. butazolidin twice a day by mouth. The white blood cells at this time were 6,700 per c.mm. with polymorph proportion 56%.

There was immediate improvement of rheumatoid effects and after 10 days, the injections were superseded by oral dosage of vitamin C 100 mg. 3 times a day and butazolidin 1 tab. daily.

On 10 May 1953 patient complained of some soreness in the throat and cramp in one foot. The white blood

cells were now 4,200, polymorphs being 38%. Butazolidin was reduced to 1 tab. 0.2 g. every other day and it was decided to incorporate into the therapy a catalyst, ferrous gluconate, designed to potentiate redux activity of the vitamin.

There was early and sustained improvement both of general condition and of the arthritis, and on 18 May 1953 the white blood cells were 8,800, with polymorphs 74%.

Therapy has continued on these lines with full restoration of activity of affected joints, freedom from pain and no further trouble with the blood. Patient is now on a trip to U.K. and when heard of on 11 July 1953 was very well.

CASE 2

Mrs. G., aged 46, a patient of one of us (L. A.), had noticed pains in hands, wrists, knees, back, etc. since December 1952, which had been steadily getting worse. She exhibited the typical appearances of rheumatoid arthritis and when seen by one of us (J. D.) in consultation on 24 April 1953 had had a course of DOCA and vitamin C, which had improved the pain in the knees but had had little or no effect on the smaller joints.

Progesterone was substituted for DOCA with little or no benefit and it was decided on 4 May 1953 to add butazolidin to the therapy. This now consisted of 0.2 g. butazolidin twice daily by oral mouth and 1,000 mg. vitamin C and 3 mg. progesterone by injection. Unfortunately no blood count was taken before starting this new course.

On 7 May 1953 the white blood cells were 3,700, and the butazolidin was reduced to 1 tab. of 0.2 g. daily. 11 May, W.B.C. 2,000. Butazolidin stopped and injections continued, to which was added 100 mg. Ferrivenin intravenously as catalyst. 13 May, W.B.C. 4,600. 14 May, injections replaced by oral ferrous iron Ribothiron one 3 times a day and vitamin C 250 mg. orally twice a day. 18 May, W.B.C. 6,800. Butazolidin twice a day renewed for 3 days and then continued one daily since. 21 May, W.B.C. 6,500. 25 May, W.B.C. 6,300. 29 May, W.B.C. 6,600.

This patient has since been kept on the above therapy and has had no further depreciation in her blood count. She had 3 additional injections of 1 g. vitamin C and 100 mg. Ferrivenin on 20 May, 27 May and 3 June. Since the last-mentioned date she has had oral therapy only, consisting of butazolidin 0.2 g. daily, vitamin C 250 mg. twice daily and Ribothiron one tab. 3 times a day.

Her rheumatoid arthritis has improved out of all knowledge and whereas previously she had been obliged to

give up housework and gardening because of inability to close her hands or to bend at the knees, she now does these chores regularly, drives her car and enjoys life with activities quite unfettered.

DISCUSSION

One swallow does not make a summer nor do 2 cases such as these guarantee that butazolidin therapy suitably buffered will become free of risk.

Empiricism such as instigated the trial of this therapy, which was based on clinical trial-and-error with illnesses of a comparable nature encountered over the past 15 years, should not go unchallenged. Those who are sufficiently interested in the subject to test the patients for vitamin storage and depletion should carry out a series of platelet counts and capillary fragility tests, to note whether butazolidin produces the anticipated damage and, what is of paramount importance, whether vitamin C and catalyst will, without fail, prevent these happenings or at a later stage restore the *status quo ante*.

It must be accepted that, just as B-group vitamins require to be phosphorylated before attaining the dignity of enzymes, and nicotinic acid is inert until transmuted into the nicotinamide, so the redux potential of vitamin C may be dormant until submitted to the trigger-effect of an appropriate catalyst as apparently exemplified in these 2 cases.

Finality can only be determined by observations covering a large series of cases with suitable checks and controls. For the present we must continue to be empirical and thereby not deny to our patients a safety measure, which we believe will not only ward off the harmful effects of butazolidin therapy but neutralize them if they have developed.

SUMMARY

The theories applying to the use of a catalyst ferrous iron, in activating the redux potential of vitamin C have been discussed.

Implementation of the redux potential is claimed to neutralize the progress of agranulocytosis and allied blood disorders such as thrombocytopenia, capillary fragility, etc.

Two cases being treated for rheumatoid arthritis with butazolidin and vitamin C developed evidence of agranulocytosis. This complication of the arthritic therapy was overcome by the addition of a catalyst ferrous iron to the vitamin and butazolidin.

No relapse has occurred during treatment persevered with for some weeks. Further research and trial of the method is advocated.

ABSTRACT : UITTREKSEL

Denny (1953): *Streptococcal Diseases of Childhood*, Postgrad. Med., 13, 153.

Penicillin, aureomycin and terramycin have proved equally effective in relieving symptoms and signs of streptococcal pharyngitis and tonsillitis. They are also equal in their suppressive effect on the development of streptococcal antibodies. Penicillin seems somewhat more effective than the other 2 drugs named in the speed and degree of eradication of *Streptococcus*. Each of the 3 drugs is highly effective in preventing suppurative complications. Penicillin is usually given intramuscularly, and information on oral penicillin in treating streptococcal infections is limited, but there is no

reason to believe that it would not be effective if given in adequate doses by that route. Sulphonamides have much less effect than antibiotics in treating streptococcal respiratory infections, but sulphadiazine is highly effective in preventing the occurrence of streptococcal infections. Oral penicillin in doses of 100,000 units two or three times a day, $\frac{1}{4}$ hour before meals, is also effective in preventing this type of infection. Rheumatic fever is prevented in a great majority of cases of streptococcal infection if the infection is treated early enough with large enough quantities of penicillin or aureomycin. Penicillin is probably slightly more effective than aureomycin for this purpose.



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South African Medical Journal

Suid-Afrikaanse Tydskrif vir Geneeskunde

EDITORIAL

THE SOUTH AFRICAN MEDICAL AND DENTAL COUNCIL

The South African Medical Council (now the South African Medical and Dental Council) was set up in 1928 in place of the separate registering authorities that previously existed in the different provinces of the Union. It functions in relation to medical practitioners and dentists, as well as certain 'medical auxiliaries'. It originally dealt also with nurses and midwives, but this function was transferred to the South African Nursing Council. Its functions extend also to medical students and interns.

The Council consists of 29 members, viz. 18 medical practitioners (10 elected by the medical profession, 4 appointed by the Minister of Health and 4 appointed by the 4 universities with medical faculties), 7 dentists (4 elected by the dental profession, 1 appointed by the Minister and 2 appointed by the 2 universities with dental faculties), 2 nurses appointed by the South African Nursing Council, and 2 laymen appointed by the Minister. The proportion of elected medical members has been reduced as the number of university representatives has increased, and will be further reduced as more medical or dental faculties are opened.

The statutes which established the Council and its predecessors limited the practice of medicine to registered practitioners, and entrusted to the Council the duty of determining the requirements for registration, which are largely academic, and the circumstances under which names of practitioners should be removed from the register, which is largely a disciplinary function. The law was passed and the Council established primarily in the interests of the public. From this point of view the interests of the profession are relevant only in so far as they coincide with the public interest. From the professional point of view, the two chief functions of the Council are: (1) the academic or educational and (2) the disciplinary or judicial.

The first of these involves the prescribing of minimal requirements for the medical courses in the South African medical schools, and the approval of the individual courses; the decision as to what courses of study and examination in other countries shall entitle Union nationals to be registered with the Council; and (within the limits prescribed by statute) questions of reciprocity in medical qualification and registration between South Africa and other countries. The decisions on these and many other subjects are governed by regulations made, not by the Council itself, but by the Governor-General or the Minister of Health, after considering the recommendation of the Council. To this extent the Council is an advisory body, not executive. Nevertheless in many

VAN DIE REDAKSIE

DIE SUID-AFRIKAANSE GENEESKUNDIGE- EN TANDHEELKUNDIGE RAAD

Die Suid-Afrikaanse Geneeskundige Raad (nou die Suid-Afrikaanse Geneeskundige- en Tandheelkundige Raad) was in 1928 ingestel om die plek in te neem van die afsonderlike liggame in die verskillende provinsies wat voorheen vir registrasie verantwoordelik was. Die werkverrigtinge van die Raad het betrekking op geneeshere, tandoartse, asook op sekere 'geneeskundige helpers'. Oorspronklik het die Raad ook met betrekking tot verpleegsters en vroedvroue fungeer, maar hierdie funksie is nou aan die Suid-Afrikaanse Verpleegstersraad oorgedra. Die funksies van die Raad raak ook internes en mediese studente.

Die Raad bestaan uit 29 lede, d.w.s. 18 geneeshere (waarvan 10 deur die mediese professie gekies word, 4 deur die Minister van Gesondheid aangestel word, en 4 deur die 4 Universiteite met mediese fakulteite aangestel word), 7 tandoartse (4 deur die tandheelkundige professie gekies, 1 deur die Minister aangestel en 2 deur die 2 Universiteite met tandheelkundige fakulteite aangestel), 2 verpleegsters deur die Suid-Afrikaanse Verpleegstersraad aangestel, en 2 lekelede deur die Minister benoem. Die verhouding van gekose mediese lede is verminder daar die getal universiteitsvertegenwoordigers vermeerder is, en sal verder verminder word namate meer mediese of tandheelkundige fakulteite gestig word.

Die wette wat die Raad en sy voorgangers ingestel het, het die beoefen van geneeskunde tot geregisteerde geneeshere beperk, en aan die Raad is die plig toevertrou om vereistes vir registrasie te bepaal (wat grotendeels akademies is), en om te bepaal onder watter omstandighede die name van geneeshere van die register verwyder moet word. Laasgenoemde is hoofsaaklik 'n dissiplinêre funksie. Die wet was opgestel en die Raad gestig hoofsaaklik om die belange van die publiek te beskerm. Uit hierdie oogpunt beskou is die belange van die professie ter sake alleenlik in soverre dit met die publieke belang in ooreenstemming is. Wat die mediese beroep betref is die twee hoof funksies van die Raad: (1) die akademiese of opvoedkundig en (2) die dissiplinêre of geregte.

Die eerste het tot gevolg die vasstelling van minimumvereistes in mediese leergange aan Suid-Afrikaanse universiteite en die goedkeuring van individuele kursusse; die beslissing oor watter leergange en eksamens in ander lande Unie-burgers aanspraak op registrasie by die Raad sal gee; en beslissing (binne die perke deur die wetgewing gestel) oor vraagstukke van resiprositeit tussen Suid-Afrika en ander lande ten opsigte van mediese kwalifikasies en registrasie. Die besluite oor hierdie en baie ander onderwerpe word beheer deur regulasies wat gemaak word nie deur die Raad sigself nie, maar deur die Goewerneur-generaal of die Minister van Gesondheid, nadat die Raad se aanbevelings oorweeg is. Tot dié mate is die Raad 'n adviserende en nie 'n uitvoerende liggaam nie. Onder-

matters, subject to any relative regulations and of course subject to its enabling statute, the Council does serve executive functions. An appeal may be made to the Supreme Court against the refusal of the Council to register a person or a degree, diploma or certificate that he holds.

The disciplinary functions are well known. The Council is required to inquire into allegations of 'improper or disgraceful' conduct on the part of medical practitioners, and for this purpose it has many of the powers of a court of law. Its decisions and sentences are of the utmost gravity, and it is essential that the members of the Council should be persons of character and ability.

The Council has other important functions. What has been said will serve to show how important it is for every medical practitioner to use his vote in the election of members now in progress.

hewig aan betrokke regulasies en vanselfsprekend aan die instellende Wet, verrig die Raad nietemin baie uitvoerende funksies. 'n Appèl kan by die Hooggeregshof aangeteken word teen die besluit van die Raad om registrasie te weier aan 'n persoon of 'n graad, diploma of sertifikaat wat hy besit.

Die dissiplinêre funksies is goedgekend. Die Raad moet klagtes teen geneeshere oor 'onbetaamlike of skandelijke gedrag' ondersoek, en vir hierdie doel is dit met baie van die magte van 'n geregshof bekleed. Die besluite en vonnisse van die Raad is van uiters gewigtige aard, en dit is derhalwe gebiedend dat lede van die Raad persone van karakter en bekwaamheid moet wees.

Die Raad besit ander belangrike funksies. Die voorafgaande sal egter aandui hoe belangrik dit is dat elke geneesheer sy stem in die huidige verkiesing van lede uitbring.

MULTIPLE PRIMARY SELF-HEALING SQUAMOUS EPITHELIOMA OF THE SKIN (FERGUSON SMITH), AND ITS RELATIONSHIP TO MOLLUSCUM SEBACEUM

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and

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In 1934 Ferguson Smith¹ reported, under the title of *A case of multiple primary squamous-celled carcinomata of the skin in a young man, with spontaneous healing*, the first case of a rare and curious condition characterized by the appearance over a period of years of numbers of squamous-celled carcinomata of the skin which healed spontaneously and showed no tendency to metastasize. Since this time the total of reported cases of similar type has risen to 12; 10 were seen in Britain, 1 in Poland and 1 in the United States.

Ferguson Smith's original case was a miner, aged 23. When he was 16 he had developed spots on his legs, which began as reddish macules that became papular, enlarged, ulcerated and eventually healed, leaving pitted scars. New lesions appeared as the old ones healed; and the number of new lesions was such that the total count of active lesions slowly increased. The face and ears soon became affected, and later lesions appeared on arms and thighs. Ferguson Smith describes an early lesion as a minute reddish papule resembling an acne lesion; but the apparent blackhead is a horny plug that cannot be expressed. As the lesion enlarges a central ulcer with irregular rolled edges develops. When the ulcer heals, after some months, the edges flatten out to leave deep pitted scars with irregular crenellated borders. Some scars show epithelial bridges reminiscent of scrophuloderma. The patient had 30 active lesions and numerous scars. The histological picture in the lesions examined was that of squamous carcinoma. This patient died of suppurative meningitis at the age of 37, the disease having remained active to the end but without ever showing any tendency for the tumours to metastasize (Currie and Smith²).

The clinical picture in our patient is similar to that in Ferguson Smith's original case.

CASE HISTORY

T. J. H., a South African-born European of remote Italian extraction, aged 42 years, was first seen in March 1953. He was a lorry-driver and had never been exposed to tar, mineral oils or arsenic. His skin, generally, was normal for his age and he was not hypersensitive to sunlight. No other member of his family was known to have suffered from any similar disease. He had suffered for 2 years from recurrent ulcers of the face, neck and forearms, and presented himself because one of these ulcers, on his upper lip, was larger than usual and distressingly conspicuous.

The lesion on the upper lip had appeared about 6 weeks before as a papule, had ulcerated and spread. When first seen by us this lesion was a crateriform ulcer, 2 cm. × 1 cm., with hard, red, elevated and overhanging edges, a necrotic and keratotic indurated base, clinically indistinguishable from a squamous-celled carcinoma (Fig. 1). Apart from this ulcer there were 7 other lesions on the skin of the face, ears, neck and forearms and 21 scars marking the sites of healed ulcers (Fig. 2).

The patient stated that the individual lesion always began as a papule, which grew rapidly, ulcerated in the centre and healed with scar formation in from 2 to 4 months. The only treatment used had been applications of a popular deodorant cream.

The active lesions were of the following types:

- a. Crateriform ulcers on upper lip and neck.
- b. Flat, circular, elevated plaques and smooth nodules on the neck.



Fig. 1. Self-healing epithelioma. Crateriform ulcer of upper lip and pitted scars on both lips.

c. Verrucous (keratinous) and ulcerated lesions of neck and forearms.

The following types of scars were seen:

- a. Deep white pitted scars on the face and neck.
- b. Scars with crenellated edges surrounding perforations of both ear lobes. These perforations were the result of ulceration; the patient had never had his ears pierced.
- c. Scars with overhanging edges, reminiscent of those seen in scrophuloderma or acne conglobata, on the neck.
- d. Superficial flat scars on the forearms and backs of hands.

The ulcer on the upper lip was treated by radiotherapy (2,000 r in 5 doses) and subsided rapidly. Some of the untreated lesions remained static during the period of observation, others showed definite signs of healing. There was no enlargement of regional lymph nodes.

HISTOLOGY

Two specimens were excised from the patient and examined histologically. One was a well-established lesion and the other was in process of spontaneous regression.

First Biopsy.

The established lesion came from an oval patch 10 × 15 mm. on the dorsum of the wrist. One-half had involuted, leaving a flat depressed scar, while the other half showed a steeply-rolled edge bordering on a central opening with keratinized papilla formation inside it.

Sections of the latter half revealed that the growth was



Fig. 2. Self-healing epithelioma. Active keratinous plaque behind ear, healed perforating lesion of lobe and pitted scar on neck.

confined to the upper two-thirds of the corium. At the central opening in the lesion the epidermis was infolded. The shape of the epidermal growth was essentially that of a multilocular subepidermal epithelial sac with a central stoma (Fig. 3). The rolled edge was produced by the upward pressure of an undermining epidermal mass. This mass invaded laterally just below the papillary layer of the corium. The central area below the stoma was filled with keratin springing from folds of surrounding epidermis. A series of V-shaped inlets and saccular and multilocular spaces was present within the central cavity.

From the deeper aspect of this epidermal proliferation there arose a complex of acanthomatous projections of different shapes and sizes, in which little keratinization was seen. At the deepest part of the growth a few small epidermal cell-groups lay in the corium, apparently unattached to the main mass. The keratin-filled bays were developed in many parts of the growth from a normal-looking but thinned stratum granulosum. Some indentations from the locules of keratin were supported by a thick stratum granulosum, and in other areas complete keratinization of the supporting epidermal layer had

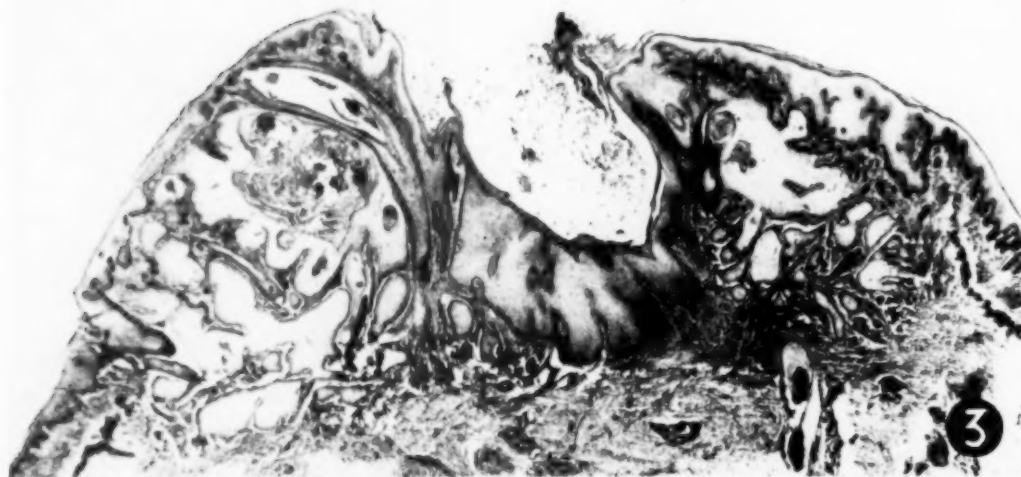


Fig. 3. Self-healing epithelioma. Section through stabilized lesion showing central stoma with commencing healing and active rolled edge with underlying epithelial infiltrates.

occurred, leaving no normal prickles and only traces of a granular layer.

There were also parts in which thick swollen masses of nucleated keratin layers were present, with no underlying granulosum. The multilocular shape of the keratin-filled spaces and the differing rates and types of keratin formation gave rise to irregularly-shaped masses of keratin. This produced a picture suggesting 'fusion of cell nests' as described by Shaw Dunn.³

Abortive parakeratotic nests were seen in some of the acanthotic strands. Some of the more superficial prickles stained poorly and the prickles were indistinct. The cell borders were marked by a honeycomb pattern made up of small, closely juxtaposed nodules of Bizzozero. Mitoses were very sparse.

The sweat ducts and hair follicles in the growth were hyperplastic and flattened, and some showed keratinization as well. Some of the hyperplastic follicles showed small areas of sebaceous cell development in the wall. Connected with the lower part of the growth were occasional indentations suggesting abortive hair papillae of lanugo hair type, and strands of epithelium resembling developing hair shafts like those of normal lanugo hair replacement.

The surrounding corium showed considerable oedema and infiltration with histiocytes. These changes were most marked under the normal epidermis and around the capillaries, whose lumina were contorted and endothelial cells oedematous. There was no evidence of lymphatic permeation by the growth. No giant cells were seen. Lymphocytes and mast cells were present, especially at the periphery of the infiltrate. Occasional polymorphs were seen, particularly near the sweat glands. A few fibroblasts could be identified as such. Plasma cells and eosinophils were scanty.

Periodic acid-leucofuchsin staining showed that the basement membrane was very largely intact around the growth except where the inflammatory infiltrate and oedema abutted on the invading epithelium. Here it was

reduced or absent. The small, apparently loose cell groups in the deeper parts of the growth and small proliferative spots on the edges of the invasive epithelium lacked a basement membrane. Reticulum was sparser and less condensed under the growth. In places it was fragmentary, but seldom altogether absent.

The elastic tissue was unaltered by the growth. Seams of elastic were compressed between expanding epithelial masses, while in places the elastic was engulfed by the epithelium and apparently 'excreted' by it in the direction of the horny pearls. A considerable senile elastosis was present, due to the exposed site from which the biopsy was taken.

Second Biopsy.

The second biopsy was of a 10 mm. growth below the elbow, which the patient thought had nearly healed. It consisted of a fully-exposed papillated horny surface with thin epithelial projections between. There was no undermining, and consequently no rolled edge. There was no growth below the upper third of the normal hair follicles, no deeper epithelial islet formation and no invasiveness. Just a papillomatosis was present. Whereas the previous growth had the shape of a narrow-mouthed sac, the present specimen seemed to show a wide mouth, as it were, with eversion of the contents (Fig. 4).

Keratin formation was of normal type throughout, with an unbroken stratum granulosum. Several suggestions of lanugo hair replacement were seen again, and in the middle of one of the horny pearls a thin hair shaft was present. No mitoses were noted.

The basement membrane in the lesion (periodic acid-leucofuchsin) was much less obvious than in the previous specimen, and was absent over several tracts. The argyrophil membrane was by contrast very well developed. The corium showed only a patchy infiltrate of lymphocytes with oedema round the blood vessels. The capillaries were not tortuous nor was their endothelium vacuolated.

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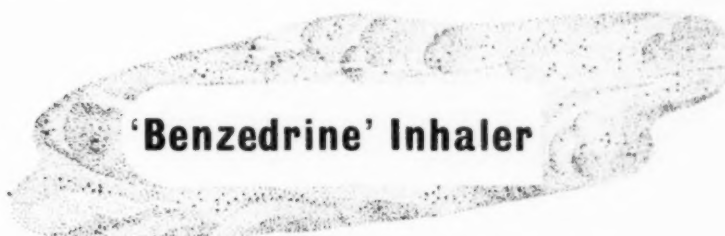


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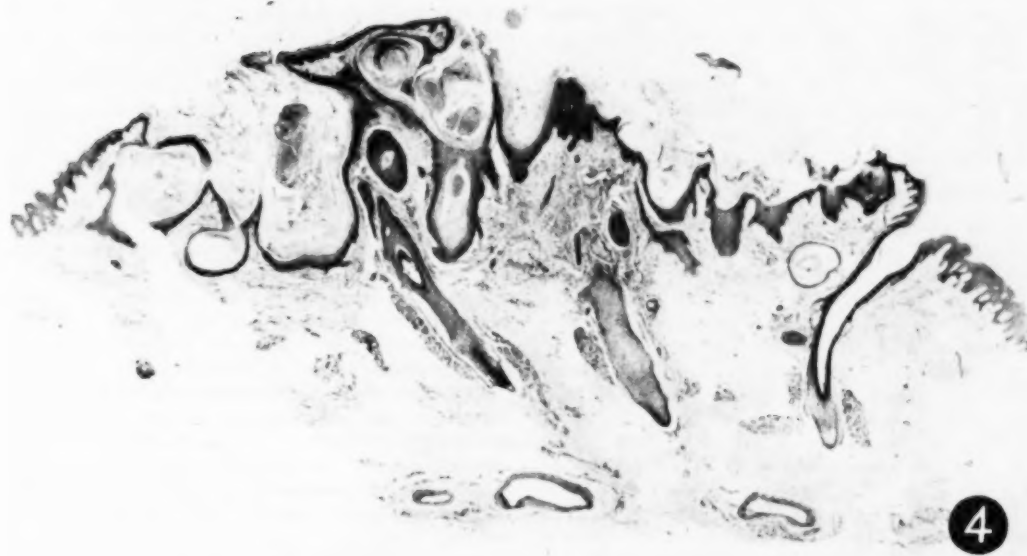


Fig. 4. Self-healing epithelioma. Lesion practically healed. Only a keratinous papillomatosis is present, with fibrous reaction in the underlying corium.

Radiating from the capillaries were large numbers of fibroblasts and an abundance of well-formed collagen. This cellular collagen was a prominent feature of the corium under the lesion.

EXPERIMENTAL

The aetiology of the Ferguson Smith epithelioma and molluscum sebaceum has been discussed by several authors, and a virus has been suspected as the cause of both. Inoculation experiments carried out by Grzybowski¹ on Ferguson Smith epithelioma were negative.

In a case of molluscum sebaceum studied some time ago we used parts of the lesion for investigating possible organismal causes. Dr. V. R. Kaschula of Onderstepoort kindly inoculated some of this material into developing hen eggs, but no lesions developed on the membranes after 3 serial transfers. Dr. H. I. Lurie of Johannesburg investigated another part of the growth for fungi, and a species of *Fusarium* was recovered which was not pathogenic to guinea-pigs. This latter investigation was carried out after Professor C. Jackson of Onderstepoort had observed fungous filaments in the horny pearls of sections of the lesion stained by the periodic acid-leucofuchsin procedure. We have been unable to find fungi in any of our material of Ferguson Smith epithelioma or molluscum sebaceum, and the *Fusarium* isolated was probably a saprophyte. The theory of an infection seems improbable as a cause for molluscum sebaceum and Ferguson Smith epithelioma.

DISCUSSION

Multiple squamous-celled carcinoma of the skin is rare and occurs almost invariably in people suffering from some pre-carcinomatous condition such as xeroderma pigmentosum, radiodermatitis, or tar, oil or arsenical keratosis. No such condition has been found in any of the patients

suffering from the disease described by Ferguson Smith. The majority of cases so far reported has corresponded to the type illustrated by Ferguson Smith's first case and by our case.

All the patients have first developed lesions in adult life, often soon after puberty, and the disease has been progressive, new lesions appearing as old ones healed, as long as they have been observed. Metastasis has never been reported as occurring in treated or in untreated patients.

In several instances more than one member of a family in the same or successive generations has been affected. Charteris⁵ reports one series where a father and 3 of his 5 sons were affected; and the grandfather may also have suffered from the same disease. Men have been affected oftener than women, but the number of cases is too small to make this observation significant.

It has been suggested that sunlight is a factor in the appearance of the Ferguson Smith type of epithelioma.⁶ Against this are the facts that solar sensitivity is not described in any case, the tumours arise on apparently normal skin, and in several cases have appeared on the covered as frequently as on the exposed areas. If sunshine were a factor we should expect the condition to be, like other skin carcinomata, far commoner in South Africa than in Britain.

The clinical picture of Ferguson Smith epithelioma is fairly constant and corresponds to that already quoted from the original case report and to the case described above. However, two cases, those of Witten and Zak⁷ and of Grzybowski,¹ do not fit into the typical picture. These cases, both men of middle age, presented an extensive eruption of papules and nodules on the face and scalp, chest, abdomen and extremities. The lesions, of which there were hundreds, varied in size from small papules

through verrucous nodules to tumours up to 4 cm. Scars of healed lesions were also present. Grzybowski's patient had been affected for 8 years. The histological picture was that of grade-1 epithelioma. In both cases there were lesions of the buccal mucosa; one had whitish streaks suggestive of leukoplakia opposite the lines of dental occlusion; the other had multiple white macules and coalescent papules, and wart-like papules on the palate.

Molluscum Sebaceum (Kerato-acanthoma).

In spite of the assertions of Currie and Ferguson Smith² to the contrary we believe, like Witten and Zak,⁷ that molluscum sebaceum (kerato-acanthoma) is very difficult to distinguish from the Ferguson Smith type of multiple self-healing epitheliomata. The term molluscum sebaceum was first used in 1936 by MacCormac and Scarff⁸ to describe a condition characterized by a solitary benign epithelial tumour, usually on the central area of the face, which they considered might be caused by hypertrophic and inflammatory changes in a sebaceous cyst. This opinion as to origin was challenged by Savatard⁹ and by Adamson,¹⁰ who considered that these tumours were clinically and histologically typical of the button type of squamous carcinoma. The name molluscum sebaceum is inappropriate as it is often used as a synonym for molluscum contagiosum and the term kerato-acanthoma employed by Rook and Whimster¹¹ is less misleading.

Rook and Whimster, in a study of 29 cases of kerato-acanthoma, found the condition twice as common in men as in women. Patients ranged in age from 20 to 80 years with an average age at onset of 49.6. No patient had more than one lesion. The site of election was the face, but lesions were also seen on the backs of hands and fingers, forearms and near the anus. Minor trauma preceding the appearance of the lesion by a few days was noted in several cases.

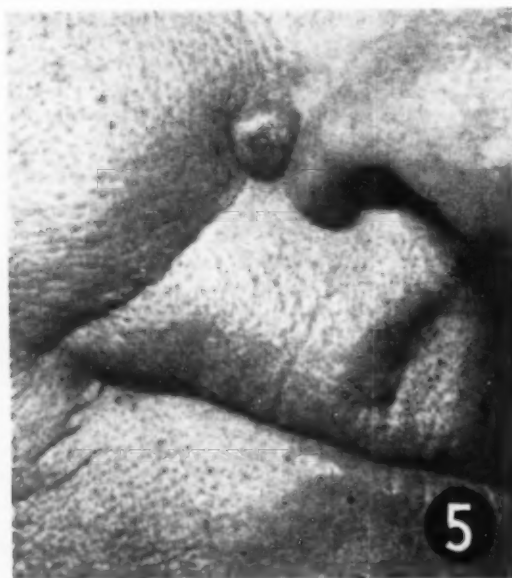


Fig. 5. Molluscum sebaceum (kerato-acanthoma). Solitary, histologically typical lesion. 5 weeks old.

The lesion begins as a firm hemispherical papule which grows rapidly to 1-2 cm. in 4-5 weeks, after which it remains stationary. The established lesion is a round, sometimes slightly pedunculated, nodule covered by tense shiny epithelium (Fig. 5). The centre is umbilicated and may be covered by a crust that is easy to remove from an underlying crater filled with keratin. The nodule is firm and elastic at this stage, but later it flattens and becomes softer.

The evolution of the lesion is not yet certainly known, but it seems probable that after 6-8 weeks it begins to diminish spontaneously. Spontaneous cure was seen in one of Rook and Whimster's cases; and another disappeared after part was removed for histological examination. Musso¹² has also reported spontaneous cure in such a case and he attributes the first use of the term kerato-acanthoma to Freudenthal.

One of Rook and Whimster's patients was employed in a gasworks and suffered from tar melanosis with multiple keratoses on the arms. He presented a lesion of the arm clinically and histologically identical with kerato-acanthoma; he considered that it was a pitch wart and said he had had many similar lesions in the course of his working life.

It is probable that the lesions described by H. Gougerot as *verrucomes* (noted by Touraine and Duperrat¹³) are similar to or identical with kerato-acanthomata.

Kerato-acanthomata can be successfully treated by excision, curettage or radiotherapy.

Spontaneous Cure.

Spontaneous cure of cancers of almost all varieties is a well-authenticated possibility. The literature on this subject as it applies to the skin and to other organs has been studied by Touraine and Duperrat.^{13, 14} They have eliminated from their review any cases of doubtful interpretation and very slow-growing epithelial tumours such as flat cicatrizing epitheliomas, Bowen's and Paget's dyskeratoses and Malherbe's calcifying epitheliomas; and any cases having received more than the most minor interventions. Central healing is well-known in basal-celled tumours and has been seen in squamous-celled carcinoma; and the benignity of certain cutaneous horns developed on senile keratoses is accepted. Carcinomata of the skin have disappeared after biopsy and section of a large vessel, after simple cleansing processes, after erysipelas, after treatment of coincidental syphilis, and after injections of lecithin locally or at a distance.

In their discussion of self-healing epitheliomas, Touraine and Duperrat drew attention to two separate aspects of the problem which are often confused; the histological diagnosis and the clinical course. It is often thought that once the diagnosis of epithelioma is made, the course without treatment must inevitably be progressive. However, the course can only be judged clinically, and if the lesion does not progress, it need not follow that the histological diagnosis was wrong. Sir Robert Muir (cited by Ferguson Smith¹), Professor Shaw Dunn³ and Professor R. A. Willis (cited by Musso¹²) have amongst others agreed to the histological diagnosis of carcinoma in examples of both molluscum sebaceum and Ferguson Smith epithelioma.

The difficulty lies in the question of invasiveness. Either

condition appears to be actively invasive with proliferating and atypical cells during the initial stages of rapid growth, and a biopsy at this time would suggest a grade-I squamous carcinoma. But once the growth is stabilized, there is a cessation of cell proliferation and invasion of cell cords, and the picture of a carcinoma may then be replaced by that of keratinizing epidermal hyperplasia. It is therefore probably better to recognize that the histological picture carries no guarantee of incurability without treatment. Nevertheless, our histological examinations have suggested an interpretation of the peculiarities of these growths which will be discussed below.

Relation of Ferguson Smith Epithelioma to Molluscum Sebaceum.

It seems to be established that Ferguson Smith epithelioma affects hair follicles and sweat ducts, being capable at times of forming sebaceous tissue, hairs or structures resembling parts of the pilar apparatus, and also involving sweat duct structure and function to a considerable extent. An identical derivation of the growth is claimed by Rook and Whimster¹¹ for molluscum sebaceum, and it seems that there are no fundamental pathological differences between molluscum sebaceum and Ferguson Smith epithelioma. The only remaining differences refer to numbers of lesions and average ages of persons affected.

The unique feature of both molluscum sebaceum and Ferguson Smith epithelioma is their tendency to spontaneous cure. We wish to suggest that this may be linked to the derivation of these growths from the pilar apparatus. In normal hair-growth a similar cycle of changes is seen: the young follicle grows rapidly downward, develops its hair, remains stable for a time and then extrudes its contents with some retraction of the deeper extensions of the follicle. The same pattern of behaviour can be seen in the 'tumours' under discussion, though scarring from the stromal reaction prevents a repetition of the cycle. In the other group of less well-differentiated hair-follicle and sweat-duct growths, the Spiegler and Brooke tumours and syringomas, there are many similarities in development and course, but the power of exfoliation is lost.

SUMMARY

1. A case of Ferguson Smith's multiple self-healing squamous epithelioma is reported. There appear to be only 12 previous descriptions in the world literature.

2. The patient was a European male of 42 who had had 21 carcinomas which healed spontaneously, and presented 8 lesions which were still active. The condition probably never leads to metastasis.

3. There are apparently 3 clinical types of spontaneously healing skin tumour in which the diagnosis of squamous carcinoma, grade I, may be made microscopically: the solitary type, also known as kerato-acanthoma or molluscum sebaceum; the multiple form, corresponding to Ferguson Smith's epithelioma, which is sometimes familial; and a third, in which hundreds of epitheliomas may be present.

4. Inoculation of material from molluscum sebaceum failed to reveal a virus on developing hen-eggs.

5. The self-healing property of these tumours has hitherto received no satisfactory explanation, but it is suggested that it may be due to their derivation from the hair apparatus. The tumours are extruded after a time in the same manner as are hairs from a hair follicle.

The authors wish gratefully to acknowledge the help of Professor C. Jackson, Dr. V. R. Kaschula and Dr. H. I. Lurie for the experimental findings quoted in the text.

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ELECTROKYMOGRAPHY: A STUDY OF HEART BORDER MOTION IN HEALTH AND DISEASE

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The electrokymogram is an apparatus used in conjunction with the standard roentgenoscope for the study of heart-border motion. As previously reported¹ the apparatus makes use of a standard two-channel electrocardiogram, a photo-electric cell, an amplifier and a standard roentgenoscope.

A further study of the electrokymogram has been under-

taken in order to compare tracings of the motion of the normal left atrium with that of the left atrium in mitral valve disease.

MATERIAL

The apparatus and technique used are the same as that first described by Henny and Boone.^{2,3} For the purpose of the study more than 100 normal healthy medical

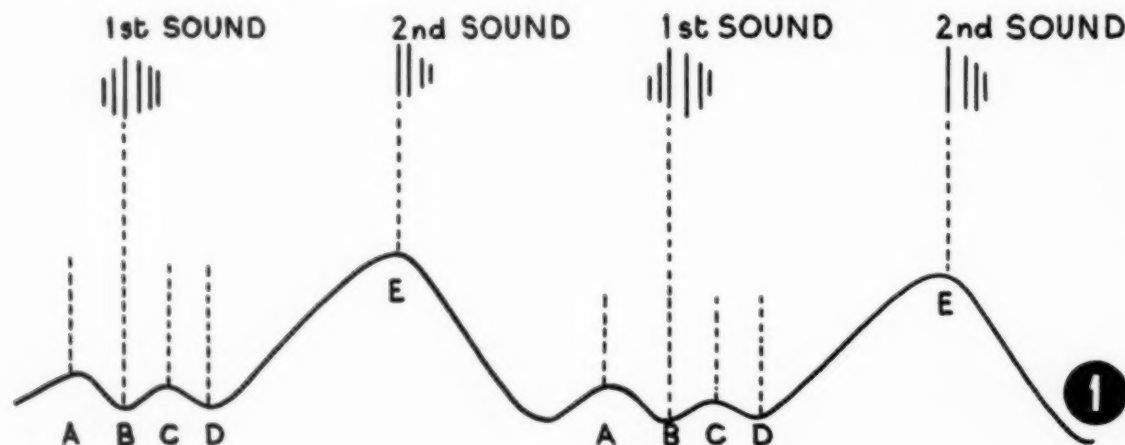
students were first examined clinically and then radiologically to exclude cardiac disease. Electrocardiographic tracings were made from the borders of the ventricles and atria of these selected cases. Twelve tracings were obtained from each left atrium, 6 in the erect and 6 in the supine position. The first oblique, postero-anterior and second oblique positions were utilized in every case.

The normal atrial electrokymogram. Electrocardiograms from the left and right atrium are essentially the same. The shadows of the atrium are usually superimposed on the shadows of the mediastinal structures. The motions of these latter structures also influence the photo-electric cell. Pulsations from the powerful ventricles play a major part in determining the movement of the atrial borders. Close to the atrio-ventricular septum the ventricular influence appears to be greatest. The influence of the ventricles and other superimposed structures on atrial movement varies in every segment examined.

On close inspection of the atrial electrokymogram it is found that the tracings are made up of a basic pattern of either 1, 2 or 3 waves, with minor variations of form. An attempt was made to standardize the electrocardiographic tracings by careful measurements in 100 3-wave tracings from the atria of normal individuals.

0.1 seconds (0.04-0.16, A-B) before the commencement of ventricular systole and at the same time as the atrial sound, we see a descent in the tracing which reaches its lowest point simultaneously with the first large vibration of the first sound. This descent in the curve is due to medial movement of the atrial wall occurring as the result of atrial systole. A fairly rapid rise now follows, explained by either an increase in the intra-atrial pressure which takes place with the bulging of the A-V valves occurring with the rapid rise of intra-ventricular pressure during the phase of isometric contraction, or by positional changes that occur during isometric contraction.^{1,2} The ascent in the curve can of course be due to a combination of these factors. The duration of this portion of the curve, B-C, is 0.06 seconds or an average 0.04-0.16.

The crest of this wave is reached at the end of the first sound, which is point 'X' of Boone *et al.*⁶ A second negative wave now forms, the descending limb being caused by the downward thrust of the A-V septum dragging the atrial wall medially by elongating the cavity. Bazett⁷ gives the following explanation for this latter phase: The posterior wall of the atrium is anchored by the pulmonary veins and with the descent towards the apex of the A-V septum the atrial wall is stretched and



A 3-wave type of curve is represented diagrammatically in Fig. 1. The intercepting lines indicate points from which measurements were made. The time intervals between these points are shown in Table I.

TABLE I

Segment	Minimum	Maximum	Average
A-B	0	0.16	0.1
B-C	0	0.16	0.06
C-D	0	0.16	0.06
2nd-E	0.04	0.14	0.07

In single-wave tracings, points A, B and C are absent and therefore A-B, B-C and C-D cannot be measured. This gives us the minimum figure 0. This distance from the first vibration of the second sound to the point E is referred to as 2nd-E.

Examples of 3-wave Normal Atrial Electrocardiograms (Fig. 2). Commencing with atrial systole, approximately

thereby causes a medial movement of the wall. This portion is C-D and has an average duration of 0.06 (0.0-0.16) seconds.

Closure of the A-V valves is followed by atrial filling, which causes lateral movement of the atrial wall, and the ascending limb of the main positive wave is written. The descending limb of this wave begins towards the end of the second sound as the result of atrial emptying. The curve descends until ventricular filling causes the atrium to ride out laterally in mid-diastole, thereby bringing about the third positive wave. The emptying phase commences approximately 0.07 (0.04-0.14, 2nd-E) seconds after the commencement of the second sound.

The mechanism of the formation of the third positive wave is probably the opposite of that causing the descending limb of the second negative wave, i.e. with refilling of the ventricle the A-V septum returns to a neutral position and causes lateral movement of the atrial wall. Atrial systole completes the cycle.

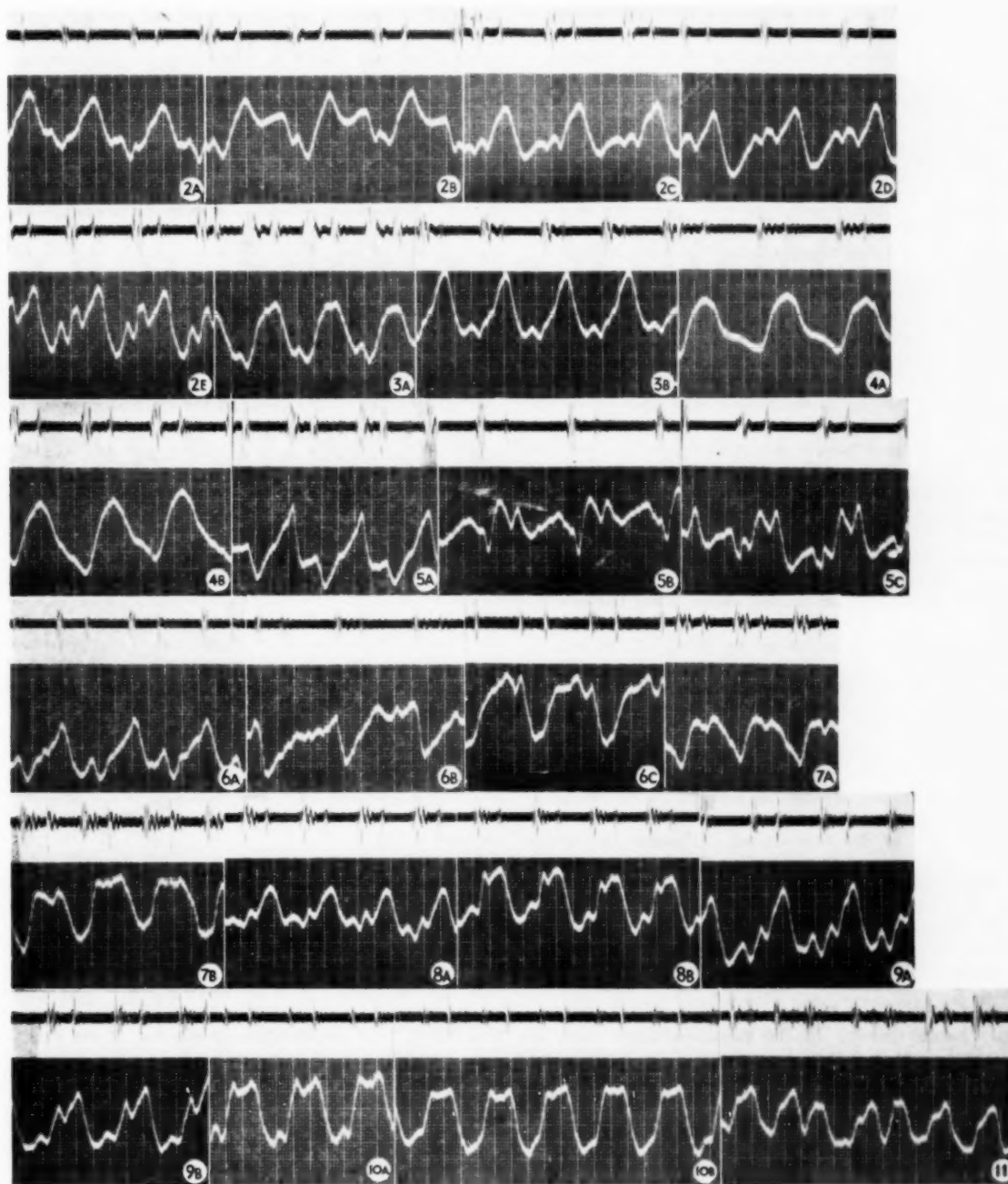


Fig. 2. Five three-wave type curves from the normal atrium.

Fig. 3. Two examples of two-wave curves from the normal atrium.

Fig. 4. Examples of one-wave curves from the normal atrium.

Fig. 5. Tracings obtained from the examination of the left auricle, showing different degrees of ventricular and arterial influence.

Fig. 6. Examples of left atrial electrokymograms showing different degrees of ventricular influence.

Fig. 7. Arterial influence is seen in the above tracings from the left atrium.

Fig. 8. The first tracing is a normal three-wave type of curve and the second shows the nucleus of a plateau curve.

Fig. 9. These tracings are similar to those in Fig. 8.

Fig. 10. Plateau curves; the first showing atrial contraction. No evidence of atrial contraction is seen in the second tracing.

Fig. 11. Lydia, Case 2. Note the auricular fibrillation.

The examples in Fig. 2 demonstrate the degree to which the tracings may differ and yet be interpreted in the same way. No explanation is forthcoming for these differences in appearance, as the tracings from different segments of the same atrium have a different appearance.

Two-Wave Curves (Fig. 3). As in the 3-wave type we find a negative wave formed by the medial movement of the atrial wall, due to decrease in volume during atrial systole. The descending limb commences approximately 0.1 (0.04-0.16, A-B) seconds before the large vibration of the first sound. The trough of the wave is found to coincide with the beginning of the isometric contraction phase of ventricular systole. With closure of the A-V valves the curve rises as the result of lateral movement of the atrial wall caused by bulging of the septum and later by filling of the atrium during ventricular systole.

Approximately 0.07 (0.04-0.14, 2nd-E) seconds after the first vibration of the second sound the curve descends as the result of emptying of the atrium after opening of the A-V valves. This descent in the tracing continues until ventricular filling produces the second positive wave in mid-diastole by carrying the atrial wall laterally. Atrial systole completes the cycle.

Single-Wave Curves (Fig. 4). A single curve is sometimes registered. The ascent commences during the first sound, occasionally with the first large vibration, very rapidly and then more gradually, until 0.07 seconds (0.04-0.14) after the commencement of the second sound, when the descent begins.

The ascending limb is caused by filling of the atrium after closure of the A-V valves and by the bulging of these valves during the isometric contraction phase of ventricular systole. The descent in the curve is due to emptying of the atrium after the opening of the A-V valves. The descent is steep during the rapid ventricular filling stage and slow during diastasis. Atrial systole is sometimes depicted by a slightly steeper fall just before the trough is reached, i.e. about 0.1 (0.04-0.16) seconds before the first large vibration of the first sound. Diastasis and atrial systole do not manifest themselves on the electrokymogram with tachycardia.

The Left Auricle Tracing (Fig. 5). The examination of the left auricle is difficult, for it is not possible always to be certain that one has the photo-cell over that part of the left border where the left auricle is sometimes border-forming.

Heim de Balsac and Routtier⁷ maintain that the auricle is only border-forming in the postero-anterior view in exceptional cases and they are supported by Keith⁸ and Epstein.⁹ Dotter and Steinberg¹⁰ using angiocardiology came to the same conclusions. A further possibility is that the auricle has no cavity and can therefore undergo no changes in volume (Taylor and McGovern¹¹).

The close proximity of the large arteries and pulmonary veins to the auricle make interpretation of auricular movement difficult. In the interpretation of tracings from over 100 different atria only one auricular tracing has been found to resemble the pattern described above for the atrium. Occasionally, however, tracings may bear some resemblance to an atrial curve.

Atrial Curves Showing Ventricular Influence (Fig. 6). Ventricular movement may have a marked influence on

the atrial tracing if one is too near the annulus fibrosus. Ventricular influence is often depicted by a steeply descending limb which is interrupted in mid-diastole by the formation of a positive wave due to atrial filling. Interpretation can be proceeded with along the same lines as for the normal tracings.

Arterial Influences (Fig. 7). The first tracing in Fig. 7 is a replica of the arterial electrokymogram and was probably formed by the left branch of the pulmonary artery. The second tracing is a plateau curve and probably formed mainly by the movements and pulsations of the right branch of the pulmonary artery and to a lesser extent by the pulsations of the veins.

Plateau Curves (Figs. 8, 9 and 10)

The tracings in Fig. 8 were obtained from the examination of the same person, the first from the left atrium in the left anterior-oblique position and the second from the right border of the heart in the postero-anterior position lying down.

The first tracing is a typical 3-wave type of atrium electrokymogram. The ascending limb of the first positive wave commencing immediately after the atrial systole complex in the second curve is probably caused by a summation of factors, viz.: 1. Bulging of the A-V valves with the increase in intra-ventricular pressure. 2. Positional changes of the heart as a whole, e.g. rotation. 3. Filling of the atrium.

The steep segment is related to isometric contraction and early emptying of the ventricle and lasts for approximately 0.08-0.09 seconds. The small negative wave on the plateau is due to the descent of the A-V septum which carries the atrial wall laterally.

Fig. 9 shows 2 tracings obtained in the examination of the posterior heart border of the same atrium in the right anterior-oblique position standing. The second curve was obtained approximately $\frac{1}{4}$ -inch inferiorly to the first on the same border. These curves have the same essential features as those in Fig. 8.

Fig. 10 shows tracings obtained from the left atria, in the right anterior-oblique position standing, of 2 different students. The first is a plateau curve in which the negative wave of atrial systole is occasionally absent. The time relationships are the same as for the tracings in Fig. 9.

The second tracing in Fig. 10 is almost a perfect plateau with no evidence of atrial contraction. The rapidly ascending limb begins with the first large vibration of the first sound, i.e. with isometric contraction of the ventricle. The descending limb commences 0.04 seconds after the first vibration of the second sound, i.e. with the opening of the A-V valves. The slowly ascending portion just before the first sound is probably due to ventricular filling. The plateau is probably due to a summation of effects, viz.: 1. Positional changes of the heart as a whole. 2. Bulging of the A-V valves with the rapid increase in the intra-ventricular pressure. 3. Filling of the atrium.

It is possible that with the rotational movement of the heart during isometric contraction the left atrium gets moved away, leaving the ventricle border-forming and alone responsible for the rapid rise in the curve. Restitution would then explain the rapid descent after the opening of the A-V valves. It is difficult to understand

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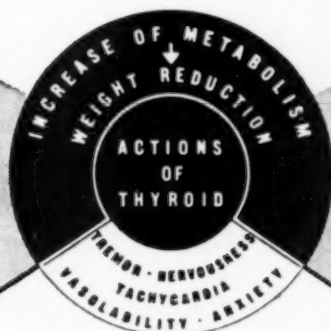
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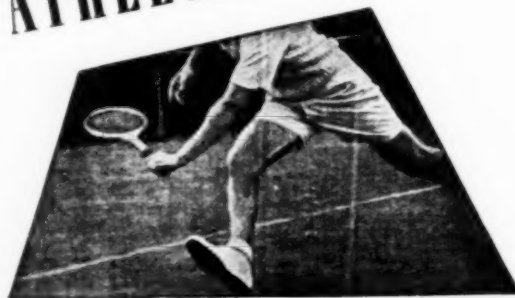
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how ventricular contraction or rotation could cause lateral movement of the ventricle wall, considering that it has always been accepted that there is generalized diminution in size with ventricular systole; yet it may be so. The fluorescent screen depicts only the movement taking place in the same plane as the screen and the image seen is a shadow having no depth. Rotation as such is not seen, and if one or other border is moved slightly medially or laterally during rotation it is registered as lateral or medial movement only, not as rotation. Therefore any movement taking place at right angles to the screen is lost—the heart possesses volume but the shadow of the heart none.

The descending limb of the plateau curve takes place with the opening of the A-V valves and can therefore also be due to emptying of the atrium, which permits of medial movement of the atrial border.

The second tracing in Fig. 10 can be described as a positive plateau curve and is only found on the posterior border in the right anterior-oblique position. The position and type of heart, e.g. oblique, transverse, etc. does not appear to play a part in the formation of the curve, for it is found in all types—in tall thin individuals with the vertical type of heart and in the short squat person with the transverse type of heart.

LEFT ATRIAL ELECTROKYMOGRAMS IN MITRAL VALVE DISEASE

Patients from the wards and out-patient department of the hospital were studied. All cases were studied clinically, electrocardiographically and radiographically before being submitted for electrokymographic examination. Thirty-five patients diagnosed as having mitral valve disease were used for study.

Differentiation of the heart sounds on the phonogram was often difficult, but was overcome by taking simultaneous electrocardiograms and phonograms first and then finding the commencement of systole on the sound track by referring to the electrocardiograms.

In many cases no atrial-border movement could be

an increased pressure in the pulmonary veins the blood flowing out of the atrium into the ventricle would be immediately replaced by blood from these veins; so producing no changes in atrial volume. The fibrosis of the atrial wall would hinder any active muscular contraction.

Tracing from the Left Atrium in Cases of Mitral Valve Disease

Fig. 11 (Lydia, Case 2). A young non-European female with a sinus arrhythmia and occasional extra-systoles. A hard blowing systolic murmur conducted round to the back, and localized rumbling diastolic murmur, were present at the apex. Roentgen examination revealed a moderately enlarged left atrium. The electrokymogram tracing is a typically plateau type of curve modified by extra-systoles.

Fig. 12 (Alfred, Case 5). A non-European adult male with sinus rhythm and no signs of failure. A soft blowing pre-systolic murmur with reduplication of the first sound, and a rumbling diastolic murmur, both localized to the apex, were heard. Radiologically a moderately enlarged left atrium was demonstrated. The left atrial tracings are normal three-and-one wave tracings. No abnormal features are noted in these electrokymograms.

Fig. 13 (Jane, Case 14). A non-European female adult with no signs of failure and a normal cardiac rhythm. At the apex a blowing systolic murmur not conducted, and a localized rumbling diastolic murmur, were present. Radiological examination revealed the presence of a moderately enlarged left atrium. The first tracing is a plateau curve and the second a single-wave curve. No abnormal features are noted in the tracings.

Fig. 14 (Mrs. B., Case 23). A European female 52 years of age with auricular fibrillation. No evidence of failure was present and a rumbling diastolic murmur was heard, localized to the apex. The left atrium was found to be moderately enlarged on X-ray examination. The tracing is a typical plateau curve.

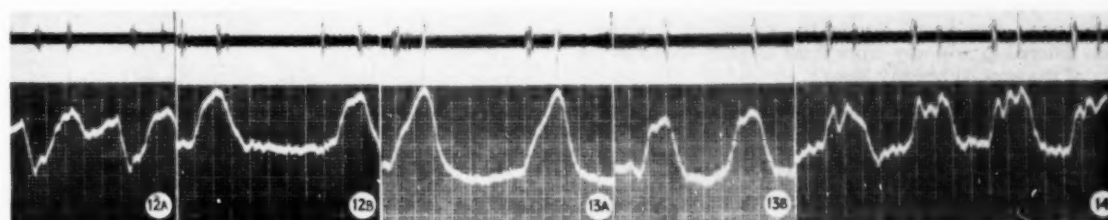


Fig. 12. Alfred, Case 5. Normal three-and-one-wave tracings are shown.

Fig. 13. Jane, Case 14. A single-wave and a plateau curve are demonstrated.

Fig. 14. Mrs. B., Case 23. A typical plateau curve in a patient with auricular fibrillation.

discerned. It was argued that if there was enough change in the density of the left ventricle to permit the registration of a densogram one should always be able to register the volume changes in the left atrium. The conclusion arrived at was that in a number of cases included in the series studied the volume changes in the left atrium were so slight that no border movement took place. It was not possible to obtain a densogram in these cases either. It is thought that where there is a narrowed mitral orifice and

DISCUSSION

An electrokymographic record of the left atrium showing a plateau curve (see Fig. 10) was first described by Luisada and Fleischner¹² and they thought it diagnostic of mitral valve disease. This type of curve was not found in the normal heart; but was present in 19 out of 23 cases of mitral valve disease studied. The form of the curve was explained by the escape of blood through the mitral valve during ventricular systole. They state that they found

this typical pattern of regurgitation in all cases of mitral incompetence. The negative wave of atrial systole was also described as becoming small, irregular and difficult to demarcate in cases of mitral valve disease. This latter feature was put down to slow emptying because of the narrowed mitral orifice or because of poor atrial contraction from musculature damage. Luisada goes on to say that this plateau curve is nearly always present in auricular fibrillation, and it may be of diagnostic value in the absence of an apical diastolic murmur.

These findings are substantiated by Lian, Facquet and Minot¹³ and Soulie, Matteo and Marchal¹⁴ who have published similar curves found only in cases of mitral valve disease.

McKinnon and Friedman¹⁵ after a study of 23 normals and 19 cases of mitral valve disease published similar findings to those of Luisada *et al.* Special emphasis was placed on the rapid filling that takes place with the commencement of the isometric contraction phase of the ventricular systole. They think that this tracing is pathognomonic of mitral regurgitation and is due to the actual reflux of blood and not to the forceful contractions of the right ventricle.

The plateau curve was not found by Dack and Paley¹⁶ in normal cases. They found it in only 50% of their cases of mitral valve disease and it appeared to be more definite in cases with auricular fibrillation. These workers also mention that the contraction of the left atrium may be hindered by the damage to the musculature.

The tracings demonstrated above (Figs. 11-14) were chosen at random from the 35 cases examined. The atrial curves found in mitral valve disease did not differ in any essential features from the curves found in the normal individuals. It is difficult to understand why the above workers did not find the plateau curve in the examination of the normal heart. Although difficult to interpret, the plateau curve has to be accepted as a normal finding and cannot be used for the diagnosis, or as an aid in the diagnosis, of mitral valve disease; i.e. mitral stenosis or mitral incompetence.

No tracing was found during the course of this study which differed in any way from those already found in the study of the normal healthy heart.

SUMMARY

The electrokymogram is an apparatus for the study of heart-border movement. A hundred normal healthy medical students were examined and the left atrial tracings obtained and compared with those found in a study of 35 cases of mitral valve disease. The plateau described by Luisada *et al.* is discussed and found to differ in no way from that found by the authors in the examination of the normal. There are no characteristic features in the left atrium electrokymogram in mitral valve disease. Curves essentially of the same character are readily found on examination of normal individuals.

We wish to express our thanks to Professor H. W. Snyman of the Department of Internal Medicine for allowing us to publish these findings and for allowing us the use of his wards. Our gratitude and thanks also to the Council of Scientific and Industrial Research for the grant made to us, without which this study would not have been possible.

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THE ASSOCIATION OF INGUINAL HERNIA WITH RUPTURE OF THE INTESTINE

REPORT OF A CASE

N. C. BODENSTEIN, M.B., CH.B. and W. H. MULLER, M.B., CH.B.

Wolmaransstad

Aird drew attention to the association between inguinal hernia and traumatic rupture of the intestine.¹ In view of the rarity of this important condition and the fact that it may be caused by the comparatively trivial action of sudden muscular effort alone, we wish to publish our experience in this case.

CASE REPORT

L. T. J., an adult European male, aged 65 years.

Previous History. Between 1940-1942 he had 4 opera-

tions for bilateral inguinal herniae (2 operations on each side), but they have both recurred since, attaining the size of walnuts and situated at the lower medial ends of the inguinal canals. They have never entered the scrotum and have always reduced easily.

Present Illness. On 14 June 1953 at 6 p.m. he was sitting on his haunches milking his cow. When she became restless he had to stand up suddenly and immediately experienced a stabbing pain low down in the right iliac fossa, which spread over his suprapubic region to the

left side. He walked home painfully to where he was staying alone and went to lie down. During the night the pain spread over his whole abdomen; he vomited 3 times and could pass neither flatus nor faeces. At 9 o'clock the next morning a friend summoned a doctor, who gave him an injection. During the day the pain increased and he vomited twice again. At 9 o'clock that night the doctor saw him again and advised removal to hospital. He was transported by car 72 miles and arrived at Wolmaransstad Hospital at 12.15 a.m.

On admission he was in a state of shock: blood pressure 80/40 mm. Hg, temperature subnormal, pulse 96 and feeble. The whole abdomen was distended and tender, with involuntary rigidity and rebound tenderness most marked in the suprapubic region. Bowel sounds were absent and rectal examination revealed marked tenderness in the rectovesical pouch. He had bilaterally reduced inguinal herniae.

The diagnosis of general peritonitis was made, but in view of his condition supportive therapy was first instituted—intravenous drip infusion, morphine, continuous gastric suction, oxygen and antibiotics.

Operative Findings. When his condition had improved laparotomy was performed under general anaesthesia through a right lower paramedian incision. On opening the peritoneum grossly distended coils of small bowel were seen and a large amount of purulent fluid was aspirated. The peritoneum was markedly congested and matted coils of small bowel were felt in the pelvis. On careful extraction and separation of these coils a circular perforation 5 mm. in diameter was found in the antimesenteric border of the ileum about 2 feet from the ileocaecal valve. The mucous membrane was pouting through the perforation.

The perforation was closed and a temporary Yudin's type ileostomy was performed above the closure. The pelvis was drained suprapubically and the abdomen closed in layers.

During the operation his condition deteriorated but

when dextraven was substituted for the intravenous infusion of dextrose and saline, it improved again.

The post-operative course was satisfactory and he was discharged 4 weeks later.

DISCUSSION

Aird¹ states that in the presence of an inguinal hernia traumatic rupture of the intestine may be due to violence applied directly to the hernia (such as forcible reduction of a strangulated or irreducible hernia), to direct abdominal injury, or rarely to a sudden hyperextension of the trunk.

Wilensky and Kaufman² cited cases in which intestinal rupture was caused by muscular effort alone, e.g. by lifting heavy weights. These authors also call attention to the fact that those who have a large or irreducible external abdominal hernia are particularly prone to intestinal rupture as the result of contusion of the abdomen.

No case has yet been recorded of the condition occurring in a woman. All the reported cases except one have been confined to some part of the small intestine.

This case is of interest in that it serves to illustrate the fact that in a comparatively small recurrent hernia, not even extending into the scrotum, a sudden trivial muscular effort alone may cause rupture of the intestine through the transmission of indirect force to a loop of intestine within the inguinal canal.

SUMMARY

A case of traumatic rupture of the ileum, in the presence of a small inguinal hernia, due to the action of suddenly assuming the erect posture, is described.

REFERENCES

1. Aird, I. (1937): *Brit. J. Surg.*, **24**, 529.
2. Wilensky, A. O. and Kaufman, P. A. (1937): *Ann. Surg.*, **106**, 373.

CLINICAL PATHOLOGICAL FINDINGS IN EARLY BILHARZIASIS

H. I. LURIE, M.B., Ch.B.

South African Institute for Medical Research, Johannesburg.

Early diagnosis and treatment of bilharzia is essential if the sequelae of this disease are to be avoided. Very little information exists on the laboratory diagnosis in man before the passage of ova. Lurie, de Meillon and Stoffberg¹ found in experimental monkeys that the complement-fixation test becomes positive 3 weeks after infection, eosinophilia usually appears after 6 weeks, and ova are found after 8 weeks. Three human cases developed a positive complement-fixation test 3 weeks after infection, and one of them showed an eosinophilia after 7 weeks.

Recently the author was fortunate in finding a party of 8 people resident in Johannesburg who interrupted a journey to bathe in the Crocodile River, which is known to be infested with *Bilharzia haematobium*. They were seen for the first time 14 days later, and each one gave

a history of an intense itch after his bathe. The majority of them reported regularly for examination, and the results of the laboratory tests are summarized in Table I.

It will be seen from this table that in 2 of them the complement-fixation test (using a cercarial antigen) was doubtful after 2 weeks, and after 3 weeks it was positive in 7 cases. One case was examined for the first time after 4 weeks when his complement-fixation test was found to be strongly positive. This particular case developed typical symptoms of allergy at the end of the 3rd week, with pyrexia (101° F), cough and oedema of the face, neck, hands, legs and external genitalia. This lasted 4 days. A blood count taken a few days later showed an eosinophilia of 900 per cmm., which rose to 2,000 per cmm. the following week.

TABLE I: COMPLEMENT-FIXATION TEST AND EOSINOPHIL COUNTS BEFORE AND AFTER TREATMENT

Case No.	1		2		3		4		5		6		7		8	
Weeks after Infection	C.F.	Eosin	C.F.	Eosin	C.F.	Eosin	C.F.	Eosin	C.F.	Eosin	C.F.	Eosin	C.F.	Eosin	C.F.	Eosin
2	—		—		±		—				±		—		+	
3	+	98	+	361	+	464	+	205			+		+	87	+	94
4	+	163	+	266	+	345	+	900	+		+		+	64	+	157
5	+	121	+	2,280	±	765	+	2,009			±	3,212	+	173	+	117
6	+	281	+	3,304	±	2,956	+	1,688					+	201	+	267
7	+	1,197		T		T		T		T		T	+	130	+	148
8		T											+	218	+	64
9			+	1,217	+	1,679	+	9,504					+	90	+	123
12	+	747	+	1,238			+	1,926							+	245
15	+	180	+	1,344	+	952	+	1,653					+	231	+	105
19	+	132	+	482	±	2,561										
22	+	50	+	364	±	561							+	92	+	72
25	+	99	+	530	±	330	+	737	+	5,222			±	135	±	33
30	—	119			—	528										
31			+	459			+	489	+	3,762			—	38	—	137
35	—	98	±	307	—	373										
36							+	620	+	2,990						
42			±	312			+	784	+	4,361						

C.F. = Complement-fixation test. Eosin = Eosinophils/cmm. T = Treatment. + = Positive. ± = Doubtful. — = Negative.

TABLE II: TIME OF APPEARANCE OF COMPLEMENT-FIXATION REACTION AND EOSINOPHILIA AFTER EXPOSURE AND THEIR DISAPPEARANCE AFTER TREATMENT

Case No.	Complement-fixation test			Eosinophilia		
	Appearance after Infection (weeks)	Disappearance (weeks)		Appearance after Infection (weeks)	Disappearance (weeks)	
		After Infection	After Treatment		After Infection	After Treatment
1	3	30	22	7	15	7
2	3			5	22	15
3	3	30	23	5	25	18
4	3			4		
5	4			?		
6	3			5		
7	3	31		—		
8	2	31		—		

Of the 6 other cases which had regular blood examinations 3 developed an eosinophilia after 5 weeks and one after 7 weeks, and 2 never developed an eosinophilia. Cercarial antigen skin-tests were consistently negative.

Urine and stools were examined for ova and although none were found it was decided to institute treatment after 7 weeks. Only the cases showing an eosinophilia were treated. They were given 75 mg./kilo of Nilodin divided over 5 days. Thereafter urine and stool examinations, complement-fixation tests and eosinophil counts were carried out at roughly 3 weekly intervals. The results are summarized in Table II. At no time were ova found.

It is interesting to note that in the 2 cases which failed to develop an eosinophilia and received no treatment the complement-fixation test reverted to negative 31 weeks after exposure. In one case the eosinophilia disappeared 7 weeks after treatment and the complement-fixation test became negative after 22 weeks. In another case the eosinophilia disappeared after 18 weeks and the complement-fixation test was negative after 23 weeks. In a third case the eosinophilia subsided after 15 weeks and the complement-fixation test became doubtful after 28 weeks. Two cases still have a definite eosinophilia and a positive complement-fixation test 35 weeks after receiving treatment.

In the 3 cases described by Lurie, de Meillon and Stoffberg¹ the complement-fixation test was negative by the 14th week. Fairley² states that persistence of a positive reaction for about 9 months after treatment indicates the presence of living worms. It is possible, therefore, that these last 2 cases have not been cured and require further treatment.

Cercarial antigen skin-tests were carried out on several occasions and at no time was a positive result obtained. This finding confirms those of Lurie, de Meillon, Stoffberg and Eiselen³ that the skin-test is frequently negative in early infections.

It is difficult to explain why in the 2 untreated cases without eosinophilia the complement-fixation test reverted to negative after 31 weeks. It would appear that they had been infected with bilharzia and that the schistosomules did not develop to maturity. It is possible that the antigen responsible for the complement-fixation test is common to the cercariae, larvae, schistosomules and

adult worms whereas the antigen producing the eosinophilia is present only in the adult worm. That the eosinophilia is not dependent on the presence of ova has been shown by its appearing in unisexual infections.¹

A further possibility that cannot be entirely excluded is that the condition was one of 'swimmers' itch', i.e. infection with a non-human species of schistosome. However, the existence of this ailment in South Africa has not yet been proved. No references could be found in the literature on the subject of complement-fixation tests in 'swimmers itch', but it is logical to expect positive results since it is well known that cercarial antigens are not species-specific. However, (a) the fact that the Crocodile River is known to be heavily infested with *B. haematobium*, (b) the itch after the bathe, and (c) the development of typical allergic symptoms in one case 3 weeks afterwards, are strong evidence that all 8 cases were infected with *B. haematobium*.

SUMMARY

1. Eight cases apparently infected with *Bilharzia haematobium* developed a positive complement-fixation test in 3 weeks and 6 showed an eosinophilia in 4 to 7 weeks.

2. After treatment with Nilodin (in the 8th week) in 3 cases the eosinophilia disappeared after 7-19 weeks. In 2 of these the complement-fixation test became negative in 22-23 weeks and in the 3rd it was doubtful after 28 weeks.

3. Cercarial antigen skin-tests were consistently negative before and after treatment.

4. In 2 cases who failed to develop an eosinophilia the complement-fixation test reverted to negative 31 weeks after exposure without any treatment.

5. The complement-fixation test is the best test for the early diagnosis of bilharzia but a positive reaction does not necessarily imply an active infection.

REFERENCES

1. Lurie, H. I., de Meillon, B. and Stoffberg, N. (1952): S. Afr. Med. J., **26**, 1005.
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ASSOCIATION NEWS : VERENIGINGSNUUS

GENERAL PRACTITIONER FEE RAISED

At a business meeting of the Natal Coastal Branch, on 20 August 1953, it was decided that in view of the rising cost of

living an increase should be made in the basic General Practitioner fee from 15s. to £1 1s. This resolution was carried nem con.

PASSING EVENTS : IN DIE VERBYGAAN

UNION DEPARTMENT OF HEALTH BULLETIN

Report for 7 days ended 15 October 1953.

Plague and Smallpox: Nil.

Typhus Fever: Cape Province. One (1) further Native case has been notified from the Queenstown municipal area since the notification in Bulletin No. 40 of 1 October 1953.

Diagnosis confirmed by laboratory tests.

Natal. One (1) European death in the Ladysmith municipal area. Laboratory confirmation awaited.

No further cases have been reported from the Port Shepstone district since the notification in Bulletin No. 38 of 17 September 1953. This area is now regarded as free from infection.

Epidemic Diseases in other Countries. At date of latest available information there existed:

Plague: Nil.

Cholera in Bombay, Calcutta (India); Chalna, Dacca (Pakistan).

Smallpox in Bombay, Calcutta, Cochin, Kanpur (India); Huiphong, Saigon-Cholon (Viet-Nam); Phnom-Penh (Cambodia).

Typhus Fever: Nil.

POLIOMYELITIS IN CANADA¹

Preliminary figures for 1953 show that there have been 5,784 cases of poliomyelitis, with 214 deaths, in Canada during 1953 up to 30 September. The incidence has been greatest in Manitoba and the Yukon.

In view of evidence obtained by Dr. W. McD. Hammon of Pittsburgh, U.S.A., gamma-globulin has been produced in Canada and used in an effort to combat the outbreaks.

Dr. Hammon found from tests involving 55,000 children that, among that half of the experimental group which received gamma-globulin, there was an encouraging decrease in paralytic poliomyelitis cases and a significant modification in the severity of the paralysis.

The Connaught Medical Research Laboratories, Toronto

1. *First National Report on Gamma-Globulin*: An address by the Minister of National Health and Welfare, Mr. Paul Martin, at the 41st Annual Meeting of the Canadian Public Health Association at Toronto, 1 October 1953.

(Dr. Defries) have produced 25,000 average doses of gamma-globulin, which is being used to inject persons under 30 coming in contact with paralytic cases. Follow-up studies are being made, and plans are in hand to secure greater supplies of blood serum from donor-volunteers.

It is recognized that the use of this blood-fraction is still in the experimental stage, and there is, as yet, little justification for undue optimism.

In any case, this form of passive immunization provides but a limited degree of protection for a few weeks only. Work is proceeding in Canada, as elsewhere, in the hope of discovering a vaccine that will confer a lasting immunity against poliomyelitis and can be produced in quantity.

MEDICAL AND DENTAL COUNCIL ETHICAL RULES

We are requested to state that any practitioner on the register can obtain from the South African Medical and Dental Council (P.O. Box 205, Pretoria), free of charge, a copy of the Rules Regarding Conduct of which the Council may take Cognizance ('Ethical Rules').

[The full text of these Rules was published in this *Journal* on 18 April 1953 (27, 332), and amendments to Rules 4 (1) and 19 on 26 September 1953 (27, 860).—Ed.]

CANDIDATES FOR ELECTION TO MEDICAL COUNCIL : KANDIDATE IN VERKIESING TOT DIE MEDIESE RAAD

Candidates for election to the South African Medical and Dental Council have submitted the following particulars:

BLACK, JAMES: M.D., Ch.B. (Edin.), F.R.C.G.O.

After qualifying in 1908, spent 2 years in Private Practice and 1 year as Hospital Resident in England before coming to South Africa in September 1911. In General Practice in Springs from 1911 to 1927 except for a year's active service during the 1st War—not accepted earlier because of ill health.

Went overseas for 2 years to specialize in Obstetrics and Gynaecology. Returned to Johannesburg in 1929 and practised there since as a specialist in Obstetrics and Gynaecology. In 1929 appointed as Obstetrician to the Bridgman Memorial Maternity Hospital and to the Queen Victoria Maternity Hospital, and thereafter appointed Junior and then Senior Obstetrician and Gynaecologist to Johannesburg Hospital.

Member of Royal College of Obstetrics and Gynaecology, 1932, and Fellow in 1938. In January 1939 appointed Professor of Obstetrics and Gynaecology at the University of the Witwatersrand. Retired from this post in December 1945 and carried on private specialist practice since then. Appointed Lecturer in Medical Ethics at the University of the Witwatersrand in 1952.

Has been a Member of the Branch Council of the Southern Transvaal Branch for many years and was President of the Branch in 1938. Member of the Federal Council of the Medical Association continuously since 1938 and awarded the Association's Bronze Medal 'for distinguished service to the Medical Profession' in October 1953.

Elected Member of the South African Medical and Dental Council in 1949 and served as Chairman of the Specialist Committee for 3 years and as a member of the Executive Committee for 2 years.

BLOOM, A.: M.C., M.D., M.R.C.P. (Edin.), D.P.H. (Lond.).

Dr. Bloom served as a member of the Southern Transvaal Branch for many years and was President of it in 1933. He was also a member of Federal Council during this time. He was an Honorary Physician to the Johannesburg General Hospital and Lecturer in Medicine to the Witwatersrand University. Is now in consulting practice in Durban. Has been a member of the S.A. Medical and Dental Council since 1949.

BRAUN, L. I., O.B.E.: M.D. (Lond.), F.R.C.P., L.L.D. (Hon. Wits.)

Born Ottosdal, Western Transvaal.

Academic: South African School and College, Cape Town. St. Bartholomew's Hospital, London.

Military Service: 1917-1919. Mesopotamia, North Western Frontier, India. R.A.M.C. 1940-1944. S.A.M.C. Casualty Clearing Station, East Africa. In command 106 South African General Hospital, Egypt.

Medical: Resident Medical Officer, Johannesburg General Hospital, 1919. Honorary Physician, Johannesburg General Hospital, 1922-1947. Consulting Physician, Johannesburg General Hospital and Springkell Sanatorium. External Examiner in medicine to Witwatersrand Medical School. Started practice as Physician 1922 in Johannesburg.

Medical Associations of South Africa: Member of Federal Council since 1936 with interval whilst on Military Service. President of Southern Transvaal Branch 1940 and in 1946. President of South African Medical Association 1952. Vice-Chairman of Federal Council since September 1951.

Medical Council: Elected member of Council in 1948 for immediate past period.

BREMER, JULIUS KARL: M.B., Ch.B. (KAPSTAD), F.R.C.S. (Eng.).

Prof. Bremer is gebore op 10 Oktober 1912 as oudste seun van wyle Dr. Karl en mevrou Bremer, destyds van Cradock, K.P. Hy het sy skoolopleiding by die Hoër Volksskool, Graaff Reinet, ontvang, waar sy vader destyds in die algemene praktyk was. Hy het die graad M.B., Ch.B. in 1935 aan die Universiteit Kaapstad behaal. Nadat hy onder proff. Sint en Falconer een jaar huisdokterskap gedoen het, is hy oorsse om in die Chirurgie te spesialiseer. In 1938 het hy die finale F.R.C.S. (Engeland) eksamen deurgekom.

Na twee jaar verdere chirurgiese opleiding, hoofsaaklik in Engeland, onder andere ook as chirurgiese registrateur by St. Thomas's Hospital, London, het hy na Suid-Afrika teruggekeer. Hier was hy vanaf 1940 tot einde 1943 in Kaapstad in die chirurgiese praktyk, ook as assistent van Dr. F. D. du T. van Zyl. Tegelykertyd was hy chirurgiese registrateur by die



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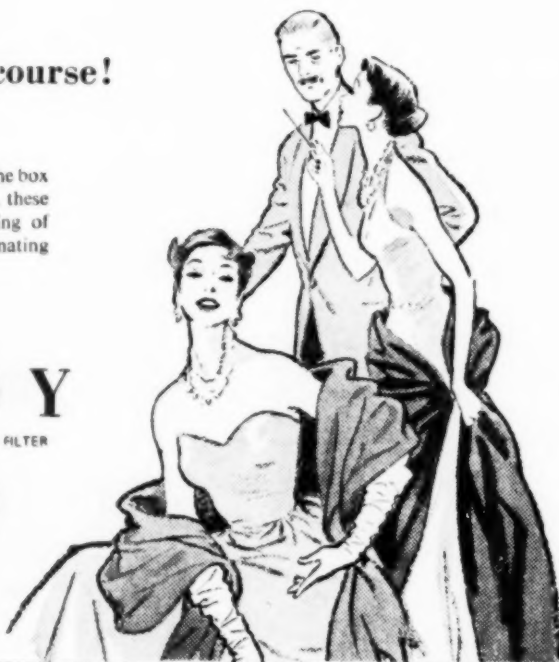
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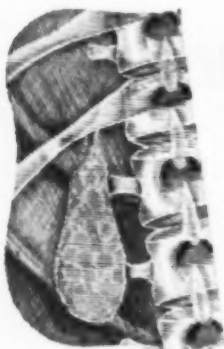
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Groote Schuur Hospitaal, Kaapstad. In 1944 het hy na Pretoria verhuis waar hy nog vandag as chirurg praktiseer.

Hy is gedurende 1944 deeltydse lektor in Anatomie aan die Universiteit van Pretoria gewees, vanaf 1945 tot 1949 senior lektor in die Chirurgie, en is vanaf 1950 Professor van Chirurgie aan hierdie Universiteit.

Hy is die verteenwoordiger van die Universiteit van Pretoria op die Nasionale Gesondheidsraad. Hy is ook voorsitter van die Mediese Komitee en lid van die Hospitaalraad van die Pretoriase Hospitaal.

CLUVER, E. H.: E.D., M.A., M.D., B.Ch. (OXFORD); D.P.H. (R.C.P. ENG.); F.R.S.A.N.I.

Professor of Physiology, Witwatersrand University, 1919. Secretary for Health and Chief Health Officer for the Union of South Africa, 1938.

Director S.A. Institute for Medical Research, and Professor of Preventive Medicine, Witwatersrand University, since 1940.

President of the Southern Transvaal Branch of the Medical Association, 1942-43. Twice President of Section D (Biological and Medical Sciences) of the S.A. Association for the Advancement of Science. President of the Health Officials Association of Southern Africa, 1948. Knight of the Order of St. John. Chairman of the Standing Committee of the National Health Council. Member of Commissions of Enquiry: (1) Heat Stroke on Witwatersrand Mines; (2) and (3) Silicosis 1943 and 1952; (4) Medical and Dental Education in South Africa (Brehner Commission, 1949).

Has published many papers in medical and scientific journals; and the following books (among others): *Public Health in South Africa* (now in its 5th edition); *Hygiene and Sanitation; Medical and Health Legislation in the Union of South Africa; Social Medicine* (in association with eminent colleagues).

Captain, S.A.M.C., S.A. Field Ambulance, France 1918. Director of Pathology for South African Forces World War II, with rank of Colonel.

S.A. Medical and Dental Council. As Secretary for Health served under the first President, Dr. Davies. Elected by medical colleagues in 1943 and again in 1948.

At present Chairman of the Auxiliaries Committee and member of two other Standing Committees, viz. Medical and Dental Education Committee, and Conjoint Committee (with the S.A. Pharmacy Board).

DEALE, ERIC W. S.: M.B., B.Ch. (DUB.).

Dr. Deale was educated at Grey College Bloemfontein, and in 1913 proceeded to Trinity College, Dublin, where he graduated in 1920.

He served as an officer in World War I, and was wounded at Ypres. In World War II was a medical officer with No. 5 South African General Hospital, Cairo.

He was in general practice in the Eastern Orange Free State for 12 years, leaving to take up an appointment as Mine Medical Officer on the East Rand. Since the war he has been in general practice in Durban.

He became a member of the Medical Association in 1921. In Natal he served on the Branch Council of the Natal Coastal Branch for 6 years, and was Chairman of the Entertainment Committee for the Durban Congress. He was elected a member of Federal Council and served the profession there for 3 years.

DE VILLIERS, J. P.: C.B.E., M.B., B.Ch., M.D. (DUBLIN), D.P.H., R.C.P. & S. (IREL.).

Born 1894 Calvinia, C.P. Educated Old South African College, Cape Town, and Dublin University. Qualified M.B., B.Ch. (1920), D.P.H. (1921) and M.D. (1922). M.O.H. of Grahamstown and District Surgeon of Albany, 1922. Since 1926 in Cape Town as Medical Officer of Health of the Cape Divisional Council Health Control Scheme. Studied Public Health conditions in the rural areas of the U.S.A. under the aegis of a Carnegie Grant, 1932. Member of the Cape Coloured Commission, 1934-1938. Member of the Association for 31 years. Secretary of the Cape Western Branch of the Medical Association of South Africa (1933-1934) and

President of this Branch 1951. Present member of Federal Council.

Served in both World Wars. During World War II Colonel A.D.M.S. of the 1st S.A. Division, and later D.D.M.S. Inland Command. As Officer Commanding, opened the 1,500-bed Imperial Military Hospital at Baragwanath. Mentioned in Despatches, and appointed a C.B.E. in 1941. Member of the S.A. Red Cross Regional Council for the past 23 years. Recently returned from a 4 months' tour in Europe pursuant to a Travelling Fellowship of the World Health Organization.

DE WET, J. M. B.: B.A. (CAPE AND DUBLIN), M.D. (DUBLIN), D.P.H. (WITS.).

When he retires next January, will have completed 30 years' service at teaching hospitals—4 as Senior Resident Medical Officer at Johannesburg and 26 as Medical Superintendent at Somerset and Groote Schuur Hospitals. His duties at these institutions and initially as Resident Medical Officer for 3 years at Pretoria Hospital—at that time staffed by specialists and general practitioners—required close co-operation with numerous specialists, trainees, interns and students, but his work has also given him a clear insight into the difficulties general practitioners have to cope with, especially in obtaining hospital treatment for their patients.

Hospital work, including various committees dealing with administrative, medical and teaching matters, took up so much of his time that he was precluded from active participation in other medical activities. Especially was this the case during the War, when, although he had offered his services to the State, he had to carry out his hospital duties unaided, with depleted medical and nursing staffs. Nevertheless, a special military ward was opened and the teaching of nurses and medical students continued without diminution.

As Afrikaans-sprekende plattelander, gebore op Aliwal Noord, 1893, het hy ook in voeling gebly met die deel van die bevolking wat so skraal verteenwoordig word op die Raad en altyd algemene Praktisyns, wat dikwels op verafgeleë dorpe praktiseer, simpatiek tegemoet gekom.

DU TOIT, JACOB: M.B., Ch.B., M.R.C.P.

Dr. Japie du Toit is op 15 November 1914 te Potchefstroom gebore, waar hy ook sy skoolopleiding gehad het. Sy mediese studie het hy in 1938 aan die Universiteit van Kaapstad voltooi. Na huisdokterskap aan die Groote Schuur-hospitaal het hy 'n aanstelling aanvaar op die staf van die S.A. Institute for Medical Research, Johannesburg, waar hy vir drie jaar as kliniese patoloog gewerk het.

Hierna is hy aangestel as lektor en later as senior lektor aan die Departement van Interne Geneeskunde, Universiteit van die Witwatersrand, met proff. W. H. Craib as hoof. Nagraadse werk in Interne Geneeskunde is later voortgesit in Edinburgh en Londen en einde 1946 het hy die Diploma M.R.C.P. (Edin.) verwerf.

Aan die begin van 1945 word hy benoem tot mede-hoof van die Departement Interne Geneeskunde aan die Mediese Fakulteit te Pretoria.

Vanaf 1948 is hy aangestel as Spesialis Internis vir die Yskor Mediese Bystandfonds asook Senior Mediese Beampte vir die Fonds. Tewens beklee hy ook die pos van deeltydse Senior Internis en hoof van 'n firma aan die Pretoriase Hospitaal asook lektor in die Departement van Interne Geneeskunde, Universiteit van Pretoria. Hy dien op die Raad van die Noord-Transvaalse Tak van die Mediese Vereniging van Suid-Afrika, asook op die Raad van die Andrew McCollm-hospitaal, Pretoria.

DU TOIT, J. S.: M.B., Ch.B., M.D. (EDIN.), F.R.C.S.

Honorary Treasurer of Medical Association of South Africa. Member of the Executive Committee and of Federal Council for past 27 years. President of Cape Western Branch M.A.S.A. 1929. Hon. Treasurer Cape Western Branch from 1917 to 1929 and elected member of Branch Council and served on many committees. Still serving on Branch Council. Served for many years on Cape Hospital Board as representative of Hon. Medical Staff of New Somerset Hospital and on the Teaching Hospital Board (Groote Schuur Hospital) as

representative of University of Cape Town. Member of the Cape Town University Council for past 27 years. Member of the advisory Committee of the Carinus College.

GREEN, CYRIL ARNOLD HOWELL: M.B., B.Ch. (OXFORD) M.R.C.S. (ENG.) L.R.C.P. (LOND.).

Dr. Green, son of Dr. P. A. Green, who practised for many years in Pietersburg, Northern Transvaal, was born in 1899. Educated at St. Andrew's College, Grahamstown, he was elected Rhodes' Scholar for his College while on military service. His medical training was undertaken at Oxford University and St. Bartholomew's Hospital. He qualified in 1924.

He has been in general practice in Johannesburg since 1929, and has taken a keen and active interest in Medical Association affairs for many years.

He has served on the Branch Contract Sub-Committee since 1934, as Branch Secretary of the Southern Transvaal Branch of the Medical Association from 1942 to 1945, and became its President in 1949. Member of Federal Council since 1943. Since the formation of the Federal Council Central Committee for Contract Practice in 1947, Dr. Green has served as its Chairman.

He was awarded the Bronze Medal of the Medical Association of South Africa in 1952, for outstanding services to the Association.

Dr. Green holds the view that the Medical Council should be more actively concerned in the effect on practice of (1) increasing development of benefit societies (2) increasing developments of Social Medical Services and (3) increasing specialization.

IMPEY, R. LANCE: M.C., M.B., Ch.B., M.D., F.R.C.S., F.R.C.O.G.

Member of South African Medical Council for 10 years. Member of South African Medical Council Executive Committee for 5 years. Member of Standing Committees of the Medical Association of South Africa for 30 years. Past Secretary and President of the Cape Western Branch of the Medical Association. Present Member of the Cape Western Branch Council, and Ethical Committee. Member of the Federal Council. Senior Lecturer, Obstetrics and Gynaecology, University of Cape Town. Lecturer in Medical Ethics, University of Cape Town. Senior Gynaecologist, Groote Schuur Hospital.

Served throughout the First World War in the Royal Army Medical Corps. Awarded the Military Cross, Battle of the Somme. Deputy Assistant Director of Medical Services, East African Campaign. Mentioned in Despatches. Major, R.A.M.C. Served throughout Second World War in the South African Medical Corps. Assistant Director of Medical Services, Cape Fortress Command. Colonel, S.A.M.C.

KLEINMAN, J.: B.A., M.B., Ch.B.

Born 1909 educated S.A.C.S. and Wynberg Boys' High qualified B.A., M.B., Ch.B. (Cape) 1933. After three years in resident posts at Woodstock, Somerset and Addington Hospitals received an R.M.O. appointment at Ladysmith and settled as a G.P. Following 4 years of war service appointed visiting anaesthetist to the 360-bed Provincial Hospital. At present Chairman of the Northern Districts Division of the Natal Inland Branch and Chairman of S.A.N.T.A. (Ladysmith); past-chairman of the B.E.S.L., S.A.R. & H. War Services Union, a senior Councillor in the borough of Ladysmith.

Firmly believes specialist register should be abolished and replaced by a consultants' register. If the G.P. is to survive and maintain reasonable living standards serious consideration should be given towards limiting the number of graduates produced annually. As a result of the present registration system the G.P. has been excluded largely from the staff of hospitals in the bigger centres. Direct access for investigation of cases has therefore been denied him. All this has contributed to the decline in status of the General Practitioner. Representation of G.P.'s on previous Medical Councils has been inadequate and the downward trend referred to has not been checked.

Pledges, if elected, to fight these matters which he believes will restore to the G.P. the trust of his patients, the respect of his colleagues and the means to do his job adequately.

LAWRANCE, W. H.: M.B., B.Ch.

Graduated 1936 at the University of the Witwatersrand. Whilst a student, took an active part in student medical affairs and was Secretary of the Students Medical Council for two years.

During the last war was Officer Commanding Medical Training Centre at Sonderwater from 1940-1941 and subsequently commanded a Field Ambulance in Madagascar, Egypt and with the 6th South African Division in Italy.

Served on North Transvaal Branch Council since 1946: Treasurer (3 years), President in 1952. Chairman of Branch Contract Practice Committee for past three years. Member of Branch Ethical Committee. Member of Steering Committee of National G.P. Group.

Representative of North Transvaal Branch on Andrew McCollm Hospital Board for last 3 years. In General Practice in Pretoria.

NEL, IZAK Z. G.: M.B., Ch.B.

Qualified in 1924 at Edinburgh University and has been practising as a general practitioner in Pietersburg for 26 years. During this time, in conjunction with Dr. Percy Green, he established the Pietersburg Division of the Medical Association—of which he was Secretary for 10 years and later President. He also served on the Northern Transvaal Branch Council. As a general practitioner he has held posts as Railway Medical Officer, District Surgeon and Medical Officer of Health at various times, and at present holds posts as Surgeon and Obstetrician at Pietersburg Hospital.

Dr. Nel is in partnership with 2 other medical men, and if elected a member of the Medical Council, will be in a position to spare the time to devote his interests to that of the Council. The interests of the general practitioner come first with Dr. Nel, and he trusts that he will be able to look after these interests in the Council.

PROKSCH, FRANCIS B.: M.B., Ch.B. (GLAS.).

Born in 1904 at Kranskop, Natal, where his father—a graduate of Trinity College, Dublin—was District Surgeon. Educated at Pietermaritzburg College and graduated M.B., Ch.B. at Glasgow University in 1930. After holding various house-surgeon appointments and one six months' assistantship overseas returned to South Africa in 1933. Was assistant to a country G.P. for two years; then bought a practice in Durban, where he is now practising as a general practitioner.

Was a member of the A.C.F. before the war, and during the war served in Kenya, Somaliland, Abyssinia, and Egypt, before returning to finish his 3 years' active service in the Union.

After the war was Secretary to the Natal Coastal Branch of the Medical Association during 3 difficult but formative years. Served a further year as a member of the Branch Council and was then appointed as Convener of the Public Information Committee—a post he has held ever since. This entails almost daily press liaison work to place questions affecting medicine and the profession before the public in proper perspective.

Main hobby writing. Under pseudonyms he contributes regular features to the press and is often called upon for special articles, varying from articles of a philosophical nature to a tourist's brochure. He is also interested in literature, dramatic art, philosophy, and fishing.

RADFORD, AUBREY: M.B., Ch.B. (EDIN.), F.R.C.S. (ENG.).

Born at Colenso, Natal in December, 1889. Volunteered in 1914-18 war—joining R.A.M.C. and served in France with the Royal Field Artillery. Attained the rank of Major and received the Military Cross by award in the field in March, 1918.

Returned to South Africa in 1920 and commenced General practice. In 1922 restricted practice to general surgery and continues to do so. In 1924 appointed surgeon to the S.A.R. & H. Sick Fund for Natal System. In 1926 appointed visiting surgeon, Addington Hospital and appointed consulting surgeon in December, 1949. In 1938 appointed visiting surgeon to

King George V Hospital for Diseases of the Chest. He is still in active practice.

Served with S.A.M.C. during 1939-45 war having charge of military patients in Addington Hospital. Was for 6 years Honorary Secretary to the Natal Coastal Branch of the Association and a member of the Federal Council.

In 1943 elected a member of the South African Medical and Dental Council and re-elected in 1949. On both occasions his candidature received the official support of the Natal Coastal Branch of the Association.

SCHNEIDER, TOBIAS: M.B., B.Ch., M.R.C.S. (Edin.).

M.B., B.Ch. (Rand) 1927; M.R.C.P. (Edin.) 1939.

In general practice for 15 years (1930 to 1945).

Specialist physician since 1945.

On Visiting Staff of Johannesburg General Hospital since 1930.

Captain S.A.M.C. during war years.

Chairman General Practitioners' War Fund, Southern Transvaal Branch, M.A.S.A., latter war years.

President, University of Witwatersrand Medical Graduates Association—1945.

Member, Southern Transvaal Branch Council, M.A.S.A. since 1944.

Honorary Secretary, Southern Transvaal Branch, M.A.S.A., 1946-1950.

President, Southern Transvaal Branch, M.A.S.A., 1952.

Member of Federal Council, M.A.S.A. since 1946.

At present Hon. Secretary/Treasurer, Association of Physicians of South Africa, and Vice-Chairman of the Southern Transvaal Sub-Group.

SHAPIRO, CHARLES: M.B. Ch.B. (Aberdeen).

Educated at S.A.C.S. and U.C.T. (B.A. Degree 1918). Qualified M.B. Ch.B. 1921 at Aberdeen University. Superintendent of Frere Hospital, East London 1922-1924. In continuous General Practice at Mowbray, Cape Peninsula, since 1924. Ho'ds Railway Medical appointment since 1925. Member of Honorary Visiting Staff Rondebosch-Mowbray Hospital since 1926. Member of Federal Council. Member of Branch Council and Chairman of Assessment Committee of the Cape Western Division of S.A.M.A. Represents Cape Western Division on National General Practitioners' Group.

SHAPIRO, MAURICE: M.B., B.Ch. (W.W.Rand) 1929.

In general practice in Johannesburg since 1931; Part-time Medical Director, S.A. Blood Transfusion Service. Elected member of S.A. Medical and Dental Council 1949-1953. Member of Southern Transvaal Branch Council of Medical Association since 1943; President of Branch for 1950; Member of Federal Council since 1945 and of its Executive Committee since 1951; Association's representative on Transvaal Public Hospitals' Advisory Council since 1948. Vice-Chairman, Tara Hospital Board. Past-President, Witwatersrand Medical Graduate Association. I maintain:

1. That the S.A. Medical and Dental Council being a statutory body has a legal and moral duty to treat all medical practitioners on its register as equals.

2. That the system of specialist registration by regulation has created two classes of registered practitioners with different rights and privileges. Registration as a specialist connotes advertisement to the public as an expert and confers the right to charge consultant fees for services many of which fall within the competence of the average general practitioner.

3. That the system is eroding the confidence of the public in the competence of the general practitioner, disrupting the relationship between the family doctor and his patients, destroying the inner unity of the profession itself and unnecessarily increasing the cost of medical care.

4. That the system is tending to make the opportunities for post-graduate advancement dependent upon nepotism and political influences and is creating monopolies in certain spheres of professional competence.

5. That a valid ethical rule exists regulating practice as a consultant and that the Council should cease its attempts to perpetuate the arbitrary and artificial distinction between general practitioner and specialist since no registered person

can be prevented from limiting the scope of his practice to a speciality.

6. That the Council should be concerned to ensure that the liberty and the opportunities to maintain and extend his knowledge and experience should be vouchsafed to every practitioner throughout his professional career.

7. That revision of the medical curriculum for the training of students in accordance with the requirements of modern medical science and practice should be the Council's first priority.

TONKIN, ARNOLD HUGH: M.B., Ch.B.

Dr. Tonkin qualified at the University of Cape Town in 1932. After completing house appointments, he practised in the Transkei for 3 years before joining the Mental Hospital Service. After 4 years' service he left to take charge of the Sir Henry Elliot Hospital at Umtata, where he served during the war years. He was then transferred to the superintendency of the Frere Hospital, East London.

He first joined the Medical Association during his early years in the Transkei and later was a member of the Southern Transvaal Branch. On his return to the Transkei he was Honorary Secretary of the Transkei Division, and on transfer to East London he was appointed Honorary Secretary and Treasurer of the Border Branch of the Association.

In 1945 he was appointed Secretary of the Association at its Head Office in Cape Town, and assumed duty on 1 January 1946. As Secretary of the Association and its Federal Council, Dr. Tonkin has an intimate knowledge of medical affairs in the Union and those aspects of medical practice with which the Association has concerned itself. His efforts on behalf of the proposed College of Physicians and Surgeons of South Africa are well known.

VERCUEIL, LEON OLIVIER: B.Sc., M.A., M.D., D.P.H., L.M.

General practitioner at Florida for 29 years. Commenced University career at Pretoria University, then Transvaal University College where obtained B.Sc. Proceeded to University of Cape Town, and at end of second year to Trinity College, Dublin in 1919. Graduated M.B., B.Ch., B.A.O. 1922, and L.M. (Rotunda Hospital); D.P.H. (Dubl.) 1923; M.D. (Dubl.) 1924; M.A. (Dubl.) 1925. While in practice in Florida proceeded overseas on several occasions for post-graduate study in Dublin, London, Vienna, Budapest, etc.

On Federal Council of Medical Association for last 9 years. Chairman, West Rand Division for 6 years. At present Vice-President, Southern Transvaal Branch and President-Elect for 1954. On Central Contract Practice Committee and Central Ethical Committee, also Workmen's Compensation Act Committee. Chairman of R.M.O. Group and Mines Benefit Society Medical Officers' Group for last 3 years. Member of Steering Committee of National General Practitioners' Group.

Chairman, Discoverers Hospital Board, Florida, and member of past-paid staff. Previously Honorary Superintendent of this hospital for 2 years. Member of West Rand School Board for more than 20 years.

During World War II, O.C. First Mounted Brigade Field Ambulance; then S.M.O. Ladysmith; finally, on active service Libya and Western Desert, Lt. Col. O.C. 18 Field Ambulance, 3rd S.A. Infantry Brigade.

Interested in all forms of sport. Hobby—big game hunting.

WAGNER, P. F. H.: M.B., B.Ch., M.D. (Dub.).

Dr. Wagner is 54, interested in medical politics since starting general practice over 30 years ago. He has taken higher degrees but preferred to remain in general practice. Member of Federal Council of Medical Association for more than 20 years, resigning 2 years ago feeling he could not act on both Federal Council and Medical Council and do justice to both bodies. Member of Specialist Committee of Medical Council. As the only general practitioner on this committee he fought successfully in favour of enabling a general practitioner of long standing to get on register provided he had a higher degree and definite amount of experience in subject in which he wishes to specialize. His Memorandum on General Practice as Stepping Stone to Specialization forms part of standing orders of Council.

While on Federal Council he was member of Executive Committee and was one of the originators of the proposal for establishment of a College of Physicians and Surgeons in South Africa. He feels that general practitioners should be able to take higher degrees there without having to spend 2 years or more in a teaching hospital.

President of the Border Branch on 3 occasions, Chairman of Division on 6 occasions. For past 16 years a member of the Frere Hospital Board and Chairman of Medical Committee for 7 years. For past 5 years has not missed a single council meeting and only one Specialist Committee meeting out of 24 possible, on account of a temporary indisposition.

According to 3 referenda, the majority wish to have a Specialist Register. Therefore feels it his duty to accept the majority rule and to work for the better standard of living for the G.P. with increased status. Would like to see a chair of General Medicine at each Medical School with General Practitioner Teachers, Clinicians and Lecturers to teach our Students the wholesome art of General Practice.

WILSON, VERNON HINDMARCH: M.D. (CAM.), M.R.C.P. (EDIN.).

Born London 1909. St. George's Hospital, London. M.R.C.S., L.R.C.P. 1933. Postgraduate Medical School, London 1944 to 1948; Assistant Lecturer. Baragwanath Hospital, Johannesburg. Appointed Physician March 1948, which position is still held. This is a Non-European Hospital of 1,400 beds, both medical and surgical with all specialities represented. The position is partly under the Transvaal Provincial Administration and partly under the Witwatersrand University.

Present Chairman of the Full-Time Hospitals and Universities Medical Officers Group of the M.A.S.A. Good working knowledge of High Dutch having married into a Netherlands family in 1939. Travelled through England, Scotland, Denmark and Holland 1952 to study medical working conditions.

Purpose of the Nomination: To maintain the highest ideals of the Medical Profession and represent full-time hospital and University Medical Practice and Non-European Medicine in South Africa.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

THE MEDICAL RESEARCH COUNCIL. LINEAR ACCELERATOR AND CYCLOTRON

The Medical Research Council has recently installed at Hammersmith Hospital, London, an 8-million-volt linear accelerator and a 45-inch cyclotron, both housed in one building, which also includes clinical rooms for patients and research laboratories.

The *Linear Accelerator* is the first machine of its kind to be built for X-ray therapy and has been designed by the

Atomic Energy Research Establishment, the Radiotherapeutic Research Unit of the Medical Research Council, and Metropolitan-Vickers Electrical Co., Ltd. (who have built the apparatus), in close collaboration. It consists of a straight copper tube, 3 metres in length, along which a beam of electrons is accelerated by high-frequency radio-waves of very high power. This has been made possible by the wartime development of micro-wave valves, such as the magnetron, and of other techniques used in radar. A beam of electrons of an equivalent voltage of 8 million volts strikes a gold target and highly-penetrating X-rays are produced.

The linear accelerator treatment room is surrounded by thick concrete walls for the protection of personnel and to prevent interference with work in the adjacent research laboratories. The operator can view the patient by means of a periscope system. The beam can be directed accurately into the patient at any desired angle. The patient is positioned by moving the floor of the treatment room up and down, and by using a specially designed moving couch. The 3 movements of the X-ray beam, the floor and the couch can be automatically controlled by electronic equipment similar to that used for the automatic positioning of radar equipment, searchlights and guns. The controls are simple and as easy to operate as those of the conventional 200,000 volts X-ray unit.

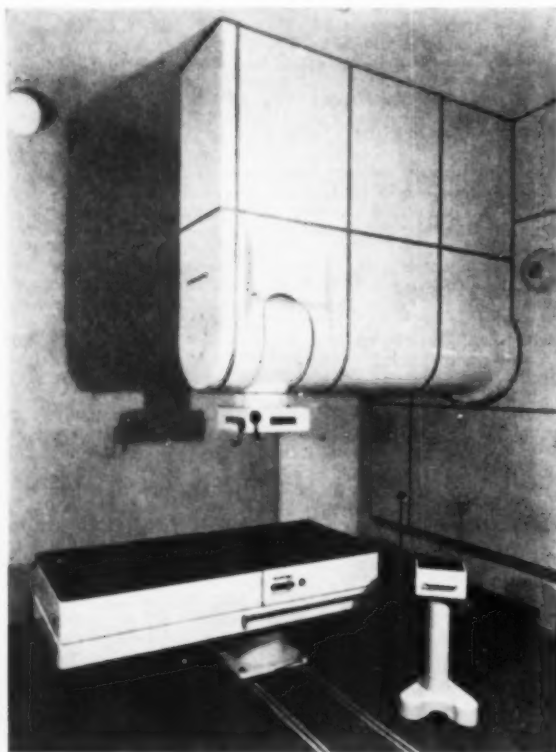
The machine permits the full exploitation of very high energy radiations, collimated into a well-defined, high intensity beam, which can be directed into deep-seated tumours. The time of each treatment is shortened to about two minutes and the danger of damage to the skin is eliminated. The value of this form of therapy has not yet been assessed.

The British Ministry of Health have also placed orders for several 4-million-volt linear accelerators to be installed in various hospitals throughout the country.

The *45-inch Cyclotron* is still under construction. It is also for accelerating particles to high speeds, but it is not electrons but heavier atomic particles which are accelerated to speeds of 30-thousand miles per second. To prevent the escape of this highly penetrating radiation, the machine is housed in a heavily insulated room and is operated from a remote control room.

The cyclotron produces an intense beam of high-speed neutrons, and investigations will be carried out into the effect of neutrons on living and inert matter and in the treatment of malignant disease.

The cyclotron also produces radioactive radio-isotopes for medical use, some of which cannot be made in the atomic pile. One important feature of this cyclotron lies in its ability to produce, at a hospital, isotopes of very short life—in some a matter of a few minutes only—which must therefore be used immediately they are produced. Treatment facilities have been provided adjacent to the machine.



The M.R.C. 8-MeV linear accelerator treatment room at Hammersmith Hospital (Metropolitan-Vickers).

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THE DR. H. A. MOFFAT MEMORIAL FUND : DIE DR. H. A. MOFFAT-GEDENKFONDS

The following letter has been addressed to the Secretary of the Association:

As one who was Dr. H. A. Moffat's house-surgeon at the New Somerset Hospital in 1922-23, I enclose a donation towards the Memorial Fund.

While all credit is due to Dr. Abelsohn for suggesting the opening of this Fund, I am certain that the late Dr. Moffat would have deprecated the undue stressing of the military side of his career. A more peace-loving and gentle individual can hardly be imagined, and while he no doubt did his military tasks ably and conscientiously, I am sure he would have preferred to be known as Dr. Moffat—as in fact he was known in Cape Town for many, many years. None of the new-fangled Mr. Moffat for him either.

As the period when I worked for him is now far enough

back to have historic significance, perhaps I may be allowed to recall his outstanding conscientiousness towards his hospital patients. The only time he really got angry with me was when I applied first aid to the injured leg of a man admitted at 3 a.m. after a motor accident rather than bring him down to the hospital at that hour.

An endearing mannerism he had was that when agreeing with you he would shake his head from side to side instead of up and down as is usually done. This at times led to some amusing misunderstandings.

M. Minde.

Sterkfontein Hospital,
Krugersdorp.

24 October 1953.

REVIEWS OF BOOKS : BOOKRESENSIES

OCCUPATIONAL HEALTH

Joint ILO/WHO Committee on Occupational Health, Second Report. World Health Organization Technical Report Series No. 66. (Pp. 30. 1s. 6d.) Geneva: World Health Organization, 1953.

Contents: 1. Measures of General Health Protection of Workers in Places of Employment. 2. Notification of Occupational Diseases. 3. Organization of Comprehensive Health-Service Programmes in Large and Small Plants, and in Agricultural Enterprises. 4. Methods of Co-operation Between Public-Health and Industrial Health Services and of Implementation of Existing Industrial Health Legislation and Standards.

Measures for promoting health through the working environment are the subject of this report. These include (1) general health protection of workers in places of employment; (2) notification of occupational diseases; (3) organization of comprehensive health-service programmes in large and small plants and in agricultural enterprises; (4) methods of co-operation between public health and industrial health services; and (5) implementation of existing industrial health legislation and standards.

Particular attention is given to the first of these topics—utilization of the place of employment as an approach to general health protection of the workers. It is pointed out, for example, that industrial and agricultural establishments can often aid their workers in securing adequate and proper nourishment, and that places of employment provide valuable opportunities for detecting, treating, and controlling communicable diseases. Other problems which are considered are those relative to women and children as workers, to the mental health aspects of work in industry, to environmental sanitation as a factor in occupational health, and to the health education of employees.

In the discussion of the organization of comprehensive health services in industrial or agricultural enterprises, programmes for large plants are sketched in some detail. Stress is laid on the rôle of the industrial nurse in implementing all the activities designed to promote the health of the worker.

Co-ordination of the efforts of public health and industrial health services is discussed in general terms, the object being, according to the report, 'to accomplish the largest volume of public-health effort at a minimum expense to the community', this being effected by a 'programme which provides for the complete co-operation on the local level of all the agencies having a bearing on the health of the workers'.

BILHARZIASIS

Expert Committee on Bilharziasis, First Report. World Health Organization Technical Report Series No. 65. (Pp. 45. 2s. 3d.) Geneva: World Health Organization, 1953.

Contents: 1. Geographical Distribution of Bilharziasis. 2. Critical Analysis of Methods of Diagnosis of Bilharziasis, with Special Reference to their Applicability. 3. Epidemiology of Bilharziasis. 4. Standard Procedures for Epidemiological Surveys of Bilharziasis. 5. Control Methods. 6. Bilharziasis Caused by *S. japonicum*.

Recent studies have shown the extent of the distribution range of actual and potential vectors of bilharziasis in tropical and subtropical regions, and the importance of human infec-

tion by various schistosome species. In a number of regions, however, it would appear necessary to carry out epidemiological surveys on the spot in order to obtain a better knowledge of the prevalence of the disease and of the local possibilities of mitigating its ravages.

The report under review will facilitate the organization of surveys of this nature.

The report presents a critical analysis of the various methods of diagnosis, with special reference to their applicability; the methods available include the recovery of *Schistosoma* eggs from the urine and stools, biopsy techniques, and immunological tests such as intradermal, complement-fixation, and flocculation reactions. The recommended techniques for each of these methods are summarized.

One chapter is devoted to the epidemiology of bilharziasis and explains in detail the rôle of molluscan vectors—in particular, their physiology and vector-parasite relationship—and the economic and social factors which influence the development of the disease in man. The report also gives a detailed description of the standard procedures recommended for epidemiological surveys for the determination of the true incidence and social importance of the disease, the conditions which favour its maintenance and spread, and of the most appropriate control methods.

Bilharziasis control is examined from the view-point of the destruction of molluscan vectors and of the treatment of infected persons. The report reviews the results recently obtained with the whole range of molluscocides in laboratories and in the field against various vector species, and includes a number of recommendations for increasing the effectiveness of snail control. Finally, details are given of the present situation concerning the treatment of bilharziasis and the suitability and relative efficacy of certain medicaments for *Schistosoma haematobium*, *S. mansoni*, and *S. japonicum* infections.

AFRICAN PSYCHOLOGY AND PSYCHIATRY

The African Mind in Health and Disease : A Study in Ethnopsychiatry. By J. C. Carothers, M.B., B.S., D.P.M. (Pp. 177. 10s.) Geneva: World Health Organization, 1953.

Contents: Part I. The Physical Background of the African. 1. Physical Anthropology. 2. The African Environment. 3. Physical Disease.

Part II. The Mind of the African. 4. The Problem. 5. The Brain and its Functioning. 6. Psychology. 7. Psychology in Relation to Environment. 8. Psychology of the Negro in the U.S.A. 9. Psychiatry. 10. Psychiatry of the Negro in the U.S.A.

Part III. Discussion. 11. Evolution and Culture. References.

Drawing upon years of experience of medical practice in Africa, and upon source material which has never before been brought together to form a comprehensive whole, Dr. J. C. Carothers has written a provocative monograph of considerable significance for psychologists and psychiatrists. It suggests even more than its title reveals: the psychology and psychiatry of the African may have relevance for most preliterate peoples in all parts of the world; and consideration of some of the features distinctive from those observed in psychology and psychiatry in Western cultures may provide

'food for thought' and perhaps, valuable lessons for those concerned with the study of the latter.

This monograph represents an attempt to give a picture of the mind of the 'untouched rural African' and to disentangle the parts that constitutional and environmental factors play in producing characters distinctive from those seen in Western cultures. While admitting that this 'untouched rural African' is a somewhat hypothetical person (since few Africans are actually untouched by some alien influences), the author justifies his approach by setting certain limits to his subject, defining it along certain lines, and concentrating on the uniformities rather than the divergencies—on the general themes which run through all the variations.

The first part of the monograph is devoted to a description of the African in his physical background—answering questions such as who he is, under what conditions he lives, to what diseases he is subject, how he is nourished, and what effects his particular culture has on him. The author then turns to 'The mind of the African'. Following a review of the various studies which have been made of the brain of the African, from the standpoints of morphology and electrophysiology, he considers in great detail the African mind in

health—'normal' psychology in relation to environment. From a discussion of the 'normal' he proceeds to a study of mental deficiency and derangement as observed in Africans. He reveals that the incidence of mental illness among Africans is only one-tenth of that recorded in both White and Negro populations living in more highly developed areas, such as Western Europe and the U.S.A. Analysis of this incidence by sex and age, and consideration of the effects of detribalization on the mental health of the African lead him to sometimes surprising findings and to thought-provoking conclusions. Descriptions of all the forms of mental disorder seen in Africans add to the clinical value of his study.

At a time when, through co-operative, international effort, an increasing number of so-called 'under-developed' countries are drawing on the technical knowledge and assistance of the Western world to bring about a gradual change in the way of life of their people, the possible effect of such a change on the mental health of the people concerned is a matter for serious consideration. Dr. Carother's monograph is therefore not only of lasting value to the psychologist and the psychiatrist everywhere, but also of topical significance to the reader interested in world problems.

CORRESPONDENCE : BRIEWERUBRIEK

NON-SURGICAL TREATMENT OF OSTEOMYELITIS

To the Editor: The case report *Successful Non-Surgical Treatment of Acute Osteomyelitis of the Ulna* by Dr. J. B. Herman in the *Journal* of 17 October made most interesting reading, as it so clearly illustrates the sequence of events one can anticipate with such treatment of a case of intra-osseous pus formation.¹

The use of about 25 g. Aureomycin, 3,500,000 units Penicillin and 1.5 g. Streptomycin over a period of 5½ weeks in a child aged 20 months must be considered adequate antibacterial therapy; and yet bone destruction continued, resulting in a pathological fracture (Fig. 3b) and requiring over 9 months for a return to some degree of normality.

To say that these progressive changes on X-ray 'are part of a process of healing and cannot be attributed to continuing infection' is not quite accurate, as it is not seen in the vast majority of cases treated by a combination of early surgery and drug therapy and therefore it 'is due to the failure to decompress the bone'.¹

This clinical course of acute osteomyelitis became apparent in 1945 when penicillin became readily available and was used to replace surgery. The result was that the non-surgical treatment of this condition was abandoned in favour of a combination of early surgery and drug therapy.¹ It is thus significant that over a period of about 2 years, coinciding with the arrival of penicillin, authors recommended the non-surgical treatment^{2, 3, 4, 5} but the results were so unsatisfactory that most authors since 1946 have again recommended surgical treatment, but now combined with adequate and specific drug therapy depending on the sensitivity of the causative organism.^{1, 6, 7, 8, 9}

We must be careful not to forget the lessons of the past.

D. J. Du Plessis,
Ch.M. (Rand), F.R.C.S. (Eng.).

Dept. of Surgery,
Medical School,
University of Cape Town,
22 October 1953.

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RETAINED URETHRAL CATHETER

To the Editor: The recent article on retained urethral catheter, treatment of which was outlined by Dr. B. W. Franklin Bishop, reflects great credit on the part of the author. However, skilful as the operation may have been, I feel that Dr. Bishop has omitted the most important reason for the successful outcome, viz. the prolonged use of potent antibiotics. Presumably those were used.

It would be interesting and instructive to know which drugs helped to bring about such an amazingly rapid and happy result.

Hay District,
Cape.
22 October 1953.

Arthur Reid.

THE FELLOWSHIP OF THE FACULTY OF RADIOLOGY EXAMINATIONS

To the Editor: While overseas recently, I interviewed Dr. Peter Kerley, the President, and Dr. Jupe, the Warden of the Faculty, on the subject of the examination for the F.F.R. This had been under discussion for some time, and the Council of the Radiological Society wished to make some definite arrangements to hold the Fellowship examination in South Africa, if it were at all possible.

They pointed out that the examination had to be held both in Therapy and Diagnosis, and it was not possible to hold the examination abroad for one section only. This entailed sending out two examiners, but the examiners in General Medicine, Surgery and Pathology could be appointed from South African Universities. It would be difficult for only one visiting examiner to conduct the examination, because he also had to take part in the examination for General Medicine, Surgery and Pathology. Moreover he would probably be expected to lecture in various parts of the country.

It is obvious that there must be a minimum number of candidates to cover the expense of the examination. If the minimum number is forthcoming, then it will be possible to hold the examination in South Africa, and thus facilitate the taking of the F.F.R., which is now recognized in Great Britain as an essential qualification for consultant posts.

Would any of the Radiologists who wish to sit for the examination in South Africa next year, communicate either with myself, or the Secretary of the Society, Dr. Harris Jackson, Pan Africa House, Troye Street, Johannesburg?

M. Weinbren,
President, The Radiological Society of South Africa.

X-ray Department,
Chamber of Mines Hospital,
P.O. Box 774,
Johannesburg.
27 October 1953.

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The successful applicant will be required to devote the whole of his/her time to the service of the Council and the appointment will be subject to the provisions of Municipal Ordinance No. 19 of 1951, the Standing Orders and regulations of the Council and the conditions of service as laid down in the Municipal Staff Code, all as amended from time to time.

Applications must be made in duplicate on the prescribed forms obtainable from the Senior Staff Officer, 2nd Floor, Municipal Buildings, Longmarket Street, Cape Town, and should reach him not later than 25 November 1953.

Canvassing of Councillors will be a disqualification.

M. B. Williams
Town Clerk

City Hall, Cape Town
28 October 1953

8467

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The Medical Association of South Africa Die Mediese Vereniging van Suid-Afrika

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KAAPSTAD : CAPE TOWN

Posbus 643, Telefoon 2-6177 : P.O. Box 643, Telephone 2-6177

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(L/V462) O.F.S. hospital town. Locum for December. Car could be provided. Terms and allowances to be discussed.

(L/V463) Tvl. town, near Johannesburg. Locum as from 1 December till 23 December.

(L/V464) Reef town. Locum as from 14 November till 31 December.

(L/V469) Tvl. hospitaaldorp. Assistent vir ses maande vanaf 1 Januarie. Salaris £100 p.m. plus £10 p.m. kartoelae. Losies verskaf aan ongetroude persoon. Huis sal gereël word vir getroude persoon. Vry petrol en olie. Kar kan ook verskaf word.

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(PD20) Natal South Coast. General mixed prescribing practice. Premium £1,000 plus £200 for full equipment of 2 surgeries. Large proportion of the patients are European visitors, and Indians. A lucrative Native practice could be built up if dispensing was carried out. Immediate introduction.

(PD22) Natal. Prescribing and dispensing country practice. Total gross receipts for 1951, £3,344 15s. 9d.; 1952, £2,817 10s. 6d.; 1953 (3 months), £846 6s. 10d. Premium £1,500, includes drugs, consulting room furniture and instruments. House for sale £5,500.

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(PD24) Natal South Coast. Practice suitable for doctor who does not want full time work. £250 for drugs, dressings, instruments, etc. No charge for goodwill. Small house on ½ morgen, £1,600. Immediate occupation.

(PD25) Natal. Prescribing and dispensing practice in pleasant country town. Total gross receipts June 1951 to 1952, £2,327 17s. 7d.; from 1952 to June 1953, £2,935 18s. 11d. Two appointments. Premium £1,500 includes drugs, instruments and furniture. Seller intends going overseas to specialise. Practice to be taken over as soon as purchaser desires. House for sale.

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(PDX) Durban. General practitioner offers 45% partnership on 18 months' purchase. Applicants should be experienced and be able to put down a certain amount of capital. Share worth at least £2,000.

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Provincial Administration of the Cape of Good Hope

Provinsiale Administrasie van die Kaap die Goeie Hoop

HOSPITALS DEPARTMENT : HOSPITAALDEPARTEMENT

1. Applications are invited from medical graduates for appointment to posts of Junior Resident Medical Officer (Intern) at the undermentioned institutions:

False Bay Hospital, Simonstown, Cape ..	1 post.
Groote Schuur Hospital, Observatory, Cape ..	41 posts.
Mowbray Maternity Hospital, Cape ..	2 posts.
Peninsula Maternity Hospital, Cape ..	3 posts.
Rondebosch & Mowbray Hospital, Cape ..	2 posts.
Victoria Hospital, Wynberg, Cape ..	4 posts.
Somerset Hospital, Green Point, Cape ..	10 posts.
(8 General wards and 2 Obstetrical Section).	
Woodstock Hospital, Woodstock, Cape ..	3 posts.
Frere Hospital, East London ..	10 posts.
Grey Hospital, King William's Town ..	2 posts.
Livingstone Hospital, Port Elizabeth ..	12 posts.
Provincial Hospital, Port Elizabeth ..	12 posts.
Sir Henry Elliott Hospital, Umtata ..	5 posts.
Swartland Hospital, Malmesbury ..	2 posts.
Conradie Hospital, Pinelands ..	5 posts.
Paarl Hospital, Paarl ..	1 post.
Kimberley Hospital, Kimberley ..	6 posts.

2. The salary attaching to a post of Junior Resident Medical Officer (Intern) is £240 per annum plus Board, Quarters and Laundering.

3. In addition to the salary and allowances stated above, a temporary non-pensionable cost-of-living allowance is payable at rates and on the conditions that may be prescribed by the Administrator from time to time.

4. Candidates applying for more than one post should submit separate applications and copies of testimonials for each post applied for.

5. Candidates writing the final M.B., Ch.B. examination can submit their applications prior to the results of the examination being known.

6. Successful candidates will be required to enter into contracts with the Provincial Administration with effect from 16 January 1954 and must be registered with the South African Medical Council before they will be allowed to assume duty.

7. Candidates who wish to enter as interns at Groote Schuur Hospital, Cape Town, should state:—

- (1) Whether they are prepared to accept any internship which is offered them; and
- (2) indicate their preference for the following Departments by marking against them 1, 2, 3, etc.
 - (a) General Medicine
 - (b) General Surgery
 - (c) Gynaecology and Obstetrics
 - (d) Other departments to be specified by applicants.

Successful candidates for the Ear, Nose and Throat, Dermatology and Eye posts will be rotated in these Departments.

8. The appointment will be in terms of and subject to the provisions of Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

9. Application must be made on the prescribed form (Staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province.

10. The completed forms must be forwarded to reach the Medical Superintendent of the institution concerned not later than 28 November 1953. (A562789)

1. Aansoeke word ingewag van mediese gegraduateerdes vir aanstelling in die betrekking van Junior Inwonende Mediese Beampte (intern) aan die ondergemelde inrigtings:—

Valsbaai-hospitaal, Simonstad, Kaap ..	1 pos.
Groote Schuur-hospitaal, Observatory, Kaap ..	41 poste.
Mowbray-Kraamhospitaal, Kaap ..	2 poste.
Skierelands Kraamhospitaal, Kaap ..	3 poste.
Rondebosch en Mowbray-hospitaal, Kaap ..	2 poste.
Victoria-hospitaal, Wynberg, Kaap ..	4 poste.
Somerset-hospitaal, Groenpunt, Kaap ..	10 poste.
(8 Algemenseaal, 2 Verloskunde-afdeling)	
Woodstock-hospitaal, Woodstock, Kaap ..	3 poste.
Frere-hospitaal, Oos-Londen ..	10 poste.
Grey-hospitaal, King William's Town ..	2 poste.
Livingstone-hospitaal, Port Elizabeth ..	12 poste.
Provinsiale Hospitaal, Port Elizabeth ..	12 poste.
Sir Henry Elliott-hospitaal, Umtata ..	5 poste.
Swartland-hospitaal, Malmesbury ..	2 poste.
Conradie Hospitaal, Pinelands ..	5 poste.
Paarl Hospitaal, Paarl ..	1 pos.
Kimberley Hospitaal, Kimberley ..	6 poste.

2. Die salaris verbonde aan 'n pos van Junior Inwonende Mediese Beampte (intern) bedra £240 per jaar, plus losies, inwoning en wasgoed.

3. Benewens die salaris en toelae hierbo vermeld, is daar 'n tydelike nie-pensioengewende duurtetoelag betaalbaar volgens die skaal en op voorwaardes wat van tyd tot tyd deur die Administrateur voorgeskryf word.

4. Kandidate wat om meer as een betrekking aansoek doen, moet afsonderlike aansoeke en afskrifte van getuigskrifte voorle vir elke betrekking waarom aansoek gedoen word.

5. Kandidate wat die finale M.B., Ch.B. eksamen skryf, kan hulle aansoeke instuur voordat die uitslag van die eksamen bekend is.

6. Van die geslaagde kandidaat word vereis om 'n kontrak met die Provinsiale Administrasie met ingang van 16 Januarie 1954 aan te gaan, en hulle moet by die Suid-Afrikaanse Mediese Raad geregistreer wees voordat hulle toegelaat sal word om diens te aanvaar.

7. Kandidate wat as interns by Groote Schuur-hospitaal, Kaapstad, aangestel wil word moet:—

- (1) Meld of hulle gewillig is om enige pos van intern aan te neem wat hulle aangebied word; en
- (2) hul voorkeur ten opsigte van die volgende afdelings aandui deur 1, 2, 3, ens., teenoor die afdelings te skryf:
 - (a) Algemene Geneeskunde
 - (b) Algemene Heelkunde
 - (c) Ginekologie en Verloskunde
 - (d) Ander departemente moet deur applikante vermeld word.

Suksevolle kandidaat vir die Oor, Neus, en Keel, Dermatologie en Oë poste sal in hierdie Departemente afgewissel word.

8. Aanstellings geskied ooreenkomstig en onderworpe aan die bepalings van Ordonnansie nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragtens opgestel is.

9. Aansoek moet gedoen word op die voorgeskrewe vorm (Staf 23) wat verkrygbaar is by die Direkteur van Hospitaal-dienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent van enige provinsiale hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.

10. Die ingevulde aansoeksvorms moet gerig word aan die Mediese Superintendent van die betrokke inrigting, en moet hom nie later as 28 November 1953 bereik nie. (A562789)

Transvaalse Provinsiale Administrasie

VAKATURES BY PUBLIEKE HOSPITALE

Aansoeke word ingewag van kandidate met geskikte kwalifikasies vir die onderstaande poste by Publieke Hospitale in die Transvaal.

Aansoeke moet gerig word aan die Geneeskundige Superintendent of Verantwoordelike Geneesheer van die betrokke hospitaal en moet volle besonderhede bevat aangaande die ouderdom, professionele, akademiese en taalkwalifikasies, ondervinding en huwelikstaaf van die applikant en moet voorts 'n aanduiding bevat van die vroegste datum waarop diens aanvaar kan word.

Lewenskostetoelae tans betaalbaar aan voltydse werknemers:

Salaris	Lewenskostetoelae	
	Getroud	Ongetroud
Oor £350	£320 p.j.	£100 p.j.

Van persone wat aangestel word, sal verwag word om bevredigende sertifikate in te dien, asook om hulle te onderwerp aan 'n geneeskundige ondersoek by die betrokke hospitaal.

Aansoek vorms is verkrygbaar van enige Transvaalse Publieke Hospitaal of die Provinsiale Sekretaris, Afdeling Hospitaaldienste, Posbus 2060, Pretoria.

Benewens jaarlikse salaris en lewenskostetoelae ontvang voltydse werknemers spoorwegkonsessie en word verlof toegestaan ooreenkomstig die hospitaal verlofregulasies.

Die sluitingsdatum van aansoeke vir die poste is 16 November 1953.

Hospitaal	Vakature	Salarisskaal	Opmerkings
Vereniging	Ongevalle-beampte (1)	£620, 780, 820, 860	Geregistreerde Mediese Praktisyn.
Vereniging	Kliniese Assistent (1)	£620, 780, 820, 860	Geregistreerde Mediese Praktisyn. 43079

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NATAL SOUTH COAST

Delightful double-storey home, comprising large lounge, dining-room, 5 beautiful bedrooms, 2 bathrooms, water-borne sewerage, electric light, numerous out-buildings, good water supply.

This residence is situated on an eminence which commands uninterrupted land and sea views and is surrounded by well-grown indigenous trees.

The property is 15 acres in extent and includes a well-developed plantation of 5,000-6,000 bananas that will give an immediate, substantial income.

In addition to this there is an opportunity for developing a lucrative Native practice in this area.

The price is only £12,500.

Apply: M. Beverley & Co. (Pty.) Ltd., 112 Norwich Union Buildings, P.O. Box 5767, Johannesburg. Telephone: 33-8243.

For Preparation of Thesis and Research Work and Translations

Translations and/or abstracts of medical and scientific articles from French, German and Italian by professional man. Apply 'A.T.D.', P.O. Box 643, Cape Town.

Position Wanted

Qualified lady radiographer and laboratory technician with overseas qualifications, seeks position in Transvaal or Cape from 1 December 1953. Three years in country. Please write to P.O. Box 454, Vereeniging, Transvaal.

City of Johannesburg

VACANCIES

Applications are invited for the following vacant positions in the City Health Department:—

- (1) Medical Officer (Native Location Clinics): Grade 10 (£996—12—£1,020 per annum) plus locomotion allowance.
- (2) Part-time Child Welfare Medical Officer: Salary £546 per annum (inclusive), plus casual locomotion allowance.
- (3) Part-time Child Welfare Medical Officer: Salary £546 per annum (inclusive), plus casual locomotion allowance.

In addition to the basic salary, for position (1) above, a cost-of-living allowance is paid in accordance with the Council's resolution of 25 August 1942, as amended, which at existing rates will give a total monthly remuneration as shown:

Annual Salary	Total Monthly Remuneration (including cost-of-living allowance)	
	£	s. d.
£1,020	114	9 2
996	112	9 2

- Applicants for (1) must be registered medical practitioners.
 Applicants for (2) must be registered medical practitioners who possess, in addition, a diploma in public health or State medicine, or a diploma in child health. Applicants will be required to work 15 hours per week.
 Applicants for (3) must be registered medical practitioners. Possession of a diploma in child health or equivalent diploma will be a recommendation. Applicants will be required to work 13 hours per week.

Details of conditions of service and duties will be supplied on application to the Medical Officer of Health, P.O. Box 1477, Johannesburg.

The successful applicants will be required to undergo a medical examination and become members of the Council's Pension Fund.

Personal canvassing for appointment in the gift of the Council is strictly prohibited. Proof thereof shall disqualify a candidate for appointment.

Applications in the candidates' own handwriting on special forms to be obtained from the Central Staff Office, Room 223, Municipal Offices, must be placed in the box in Room 223, Municipal Offices or posted so as to reach the Town Clerk not later than 4 p.m., 14 days after publication of this advertisement in the South African Medical Journal.

Brian Porter
Town Clerk
(701/703)

16 October 1953

City of Bloemfontein

VACANCY: HOUSE SURGEON

Applications are invited for appointment as *House Surgeon* at the Isolation Hospital, Tempe, at a salary of £20 per month, plus free board and lodging, plus temporary cost-of-living allowance, at present £274 per annum for married persons and £124 16s. 0d. per annum for single persons.

The appointment will be for a period of six months and the successful applicant will be required to assume duty on 1 January 1954, or earlier.

The Isolation Hospital is recognised by the South African Medical Council as an institution for compulsory intern-ship.

Applications stating age, sex, race, marital state and qualifications must reach the undersigned not later than 12 noon on Friday, 20 November 1953.

Canvassing for appointment will be a disqualification.
(Notice No. 179—24.10.53)

P. R. Joubert
Town Clerk
(10134)

Provincial Administration of the Cape of Good Hope

VICTORIA HOSPITAL, WYNBERG

VACANCY: MEDICAL PRACTITIONER GRADE "A"

(Salary Scale £500—£600—£660—£720.)

Applications are invited from suitably qualified persons for appointment to the above post.

In addition to the salary scale indicated a temporary cost-of-living allowance, at rates prescribed from time to time by the Administrator, is payable. The present rate is £100 per annum for single persons and married women whose husbands are not in Government employment, and £320 per annum for married men.

The conditions of service are prescribed in terms of the Hospital Board Service Ordinance No. 19 of 1941, as amended from time to time, and the regulations framed thereunder.

The appointment will be on contract for two years in the first instance and may be renewed twelve months at a time up to a maximum of four years. The appointment may, however, be terminated by three months notice, in writing, on either side.

Applications should be submitted, in duplicate, on the prescribed form (staff 23), which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or the Medical Superintendent of any provincial hospital or Secretary of any School Board in the Cape Province.

The completed application forms should be addressed to the Medical Superintendent, Wynberg, Orthopaedic and Convalescent Hospitals, P.O. Box 1487, 58 Loop Street, Cape Town.

The closing date for receipt of applications is 28 November 1953. (A560617)

(This advertisement is cancelled.)

Public Service Vacancies

1. The attention of medical practitioners and dentists registered with the South African Medical and Dental Council, is drawn to an advertisement appearing in the *Government and Provincial Gazettes* of 23 and 30 October and 6 November 1953, inviting applications for the undermentioned posts:

Post	Salary Scale £	Department/ Administration
Senior Pathologist	1,920	Health (Durban)
Chief Medical Inspector of Schools	1,560	Orange Free State Provincial Administration
Medical Officer	1,380	Health (Pretoria)
District Surgeon, Grade II	1,380	Health (Germiston)
Medical Inspector	1,380	Health (Cape Town)
Medical Officer (Riet- fontein Hospital)	1,020×60— 1,380	Health (Johannesburg)
District Surgeon, Grade III	1,020×60— 1,380	Health (Bloemfontein and East London)
School Dentist (Educa- tion Department)	1,020×60— 1,200	Cape Provincial Ad- ministration
Medical Officer (on con- tract for two years)	1,020×60— 1,380	Health (Geilima, Sand Flats and Tongaat)

2. In addition to salary a cost-of-living allowance at the rate of £234 per annum is at present payable to married officers.

3. It is emphasised that full particulars of qualifications and previous experience must be furnished but original certificates and testimonials should not be submitted. Application forms Z.83 and P.S.C. 8(a) are obtainable from the department administration indicated to whom filled in forms must be addressed.

4. The closing date for the receipt of applications is 28 November 1953. (42976)

Rooms to Share

Doctor prepared to share fully equipped waiting room and surgery in Central position. Write 'A.T.C.', P.O. Box 643, Cape Town.

Provinsiale Administrasie van die Kaap die Goeie Hoop

VICTORIA-HOSPITAAL, WYNBERG

VAKATURE: MEDIESE GENEESHEER GRAAD „A"

Aansoeke word ingewag van persone met geskikte kwalifikasies vir aanstelling tot die pos van Mediese Geneesheer Graad „A" by bogenoemde inrigting met salaris volgens die skaal £500—£600—£660—£720.

Benewens die salarisskaal soos aangedui is 'n leweskostetoelae betaalbaar aan voltydse beampptes en werknemers teen bedrae wat tyd tot tyd deur die Administrateur vasgestel word. Die huidige tarief is £100 per jaar vir ongetroude persone of getroude vrouens wie se eggenote nie in die Staatsdiens werksaam is nie, en £320 per jaar vir getroude mans.

Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraaddiens nr. 19 van 1941, soos gewysig, en die regulasies daarkragtens opgestel.

Die aanstelling sal, in die eerste opsig, onder kontrak vir twee jaar wees en daarna hernubaar elke twaalf maande tot op 'n maksimum van vier jaar.

Die aanstelling mag daarenteen beëindig word by wyse van drie maande skriftelike kennisgewing aan beide kante.

Aansoek moet gedoen word, in duplo, op die voorgeskrewe vorm (staf 23) wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Suprintendent van enige provinsiale hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.

Die voltooië aansoekvorms moet gerig word aan die Mediese Suprintendent, Wynberg, Ortopediese en Herstellingshospitale, Posbus 1487, Loopstraat 58, Kaapstad.

Die sluitingsdatum vir ontvangs van aansoeke is 28 November 1953. (A560617)

(Hierdie advertensie is teruggetrek.)

The South African Institute for Medical Research

JOHANNESBURG

The Board of Management of the above Institute offers a further number of Fellowships for a period of three years at a salary of £500, £600, £700 respectively, plus a variable cost-of-living allowance which is at present approximately £260 per annum. During this period the appointees will be trained in all departments. They will then be permitted to take a D.C.P. course, subject to the officer concerned being prepared to return to the Institute for one year after obtaining his degree on the Senior Professional Scale of £1,000 x 100—£1,400. While attending the full-time D.C.P. course at the University the officer will continue to receive full pay at the rate of £700 per annum.

Applications will be received up to 15 November for appointments from 1 January 1954.

All appointments will, in the first instance, be for a period of twelve months and reviewed annually, subject to satisfactory progress.

Applications should be addressed to the Director, South African Institute for Medical Research, P.O. Box 1038, Johannesburg.

Municipality of Usakos

STAFF VACANCY

Applications addressed to the Town Clerk are invited for the post of Medical Officer of Health at the remuneration of £10 per month.

H. P. Steyn
Town Clerk

Municipal Office
P.O. Box 67
Usakos





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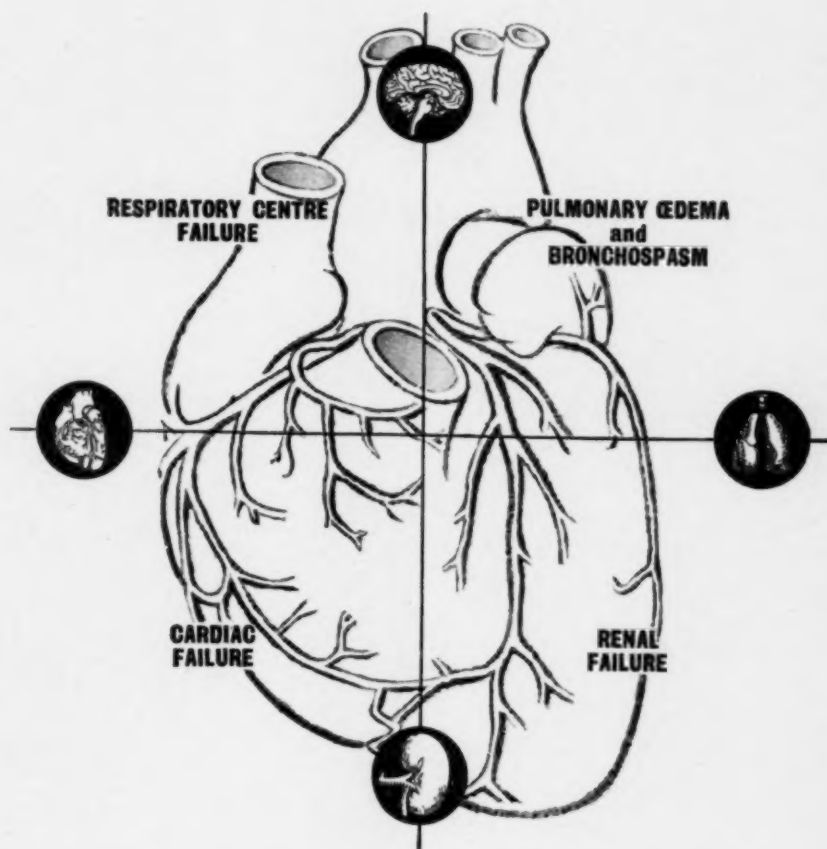
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